Course analysis (2015/16 period 1)
DD2380 Artificial Intelligence, 6hp

Course responsible: Patric Jensfelt
Lecturers: Patric Jensfelt and Jana Tumova

Course assistants: Judith Bütepage, Anastasiia Varava, Kaiyu Hang, Sofia Broomé, Joao Carvalho, Michele Colledanchise, Nadine Drollinger, Alexandros Filotheou, Michele Welle and Fabian Schilling

Number of lectures: 13 lectures (26 hours)

Registered students: 377 according to VIS (VG.6)

Passed students: 328 according to VIS (VG.6)
"Prestationsgrad"
- **overall:** 5% ???? (ai15 85%, ai14 80%)
- **women:** 8% ???? (ai15 77%, ai15, 69%)

"Examinationgrad"
- **overall:** 87% (ai15 80%, ai14 77%)
- **women:** 80% (ai15 76%, ai14 63%)

Course material:
- Optional Book: Artificial Intelligence: A Modern Approach (by Stuart J. Russell and Peter Norvig, Prentice Hall
- Lecture notes: Available for download from course webpage

Examination requirements:
- **TEN1** 2hp
  - Quizzes on most lecture topics
  - 1 essay on ethics
- **LAB1** 4hp
  - 2 homework assignments
  - Optional project completed in groups of 4 students for higher grades

Summary of impressions:
The course was well received and that students found it interesting. The average grade on a 1-10 scale was 7,78 (almost identical to last years 7,74) regarding how interesting it was.

There were too many deadlines!

Relation to the previous years:
The biggest differences from last year were:
- Changed the course components to better reflect how the course is actualy

examined and how it connects to the learning outcomes. The TEN1 component tests the basic understanding and the broad knowledge whereas the LAB1 components goes deeper into a few selected areas and tests the ability to solve problems. This worked well in terms of the course execution but led to some issues with the reporting the end for students that started the course last year and then had mixed results. In the long run it is a much better system now.

- The project was made optional. To be allowed to do it you had to qualify by doing well enough on the homework assignments. Overall this change was positive. Fewer students that really had no interest in making the project and did the absolute minimum required in the past and learned almost nothing now saved time. The downside was that the minimum requirement for passing the course might have become a bit low.
- The project was assessed as Fail or "A". This make it more clear that it had high expectations.
- Provided "walk-throughs" for the homework assignments so that students were better guided during the initial phases of the work. Conceptually it was a very good idea but some improvements can be made in the way the simpler tasks are dealt with. In some cases too much time was spent fighting the system kattis to get code to pass.
- The quizzes now only had one deadline at the end, instead of one per quiz along the quiz. Overall this was very good.
- An intermediate step was introduced for the ethics assignment. The students met in groups and discussed the assignment and submitted a document reflecting on the discussion. This increased the quality of the assignment and made it more interesting.

Grading:
A criteria based grading scheme is used. The Quizzes and the Essay were only graded Pass/Fail. The final grade was based on the grade on HW1, HW2 and the project. Not doing the project rested in a maximu grade of C. Otherwise the grade was given as the average of HW1 and HW2.

Homework assignments: Like before the homework assignments focused on implementation and were corrected automatically by the course portal system.

Lectures:

- Stefan Carlsson gave an invited lecture on deep learning
- Combient talked about AI and machine learning in industry
- Danica Kragic gave an invited lecture on robotics and computer vision
- Jana and Patic split the remaining lecture roughly equal

Planned changes:

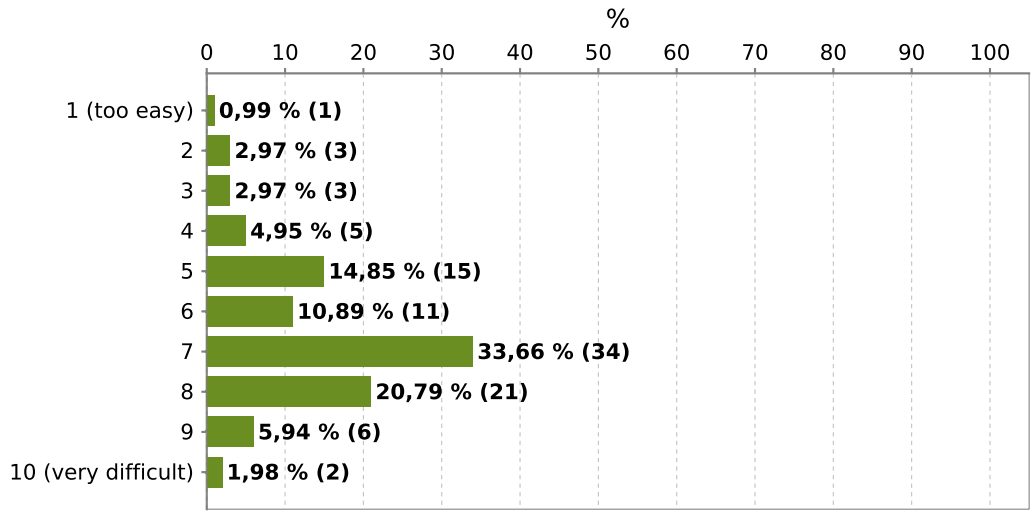
- Make it more clear how you are allowed to collaborate and that plagiarism is not OK

- Update the homework assignments to ensure that time is spent on the right thing from the start. Completely removing “time wasted on debugging” is impossible and probably not desired as it is about solving real world tasks and in the real world being able to debug and solve problems with only partial information is very important.

Survey results

Survey	Course evaluation
Event	DD2380 Artificial Intelligence ai16
Status	open
Date	2016-12-02 10:26
Group	Participants
Answered by	192(423) (45%)

How difficult did you perceive the course to be?

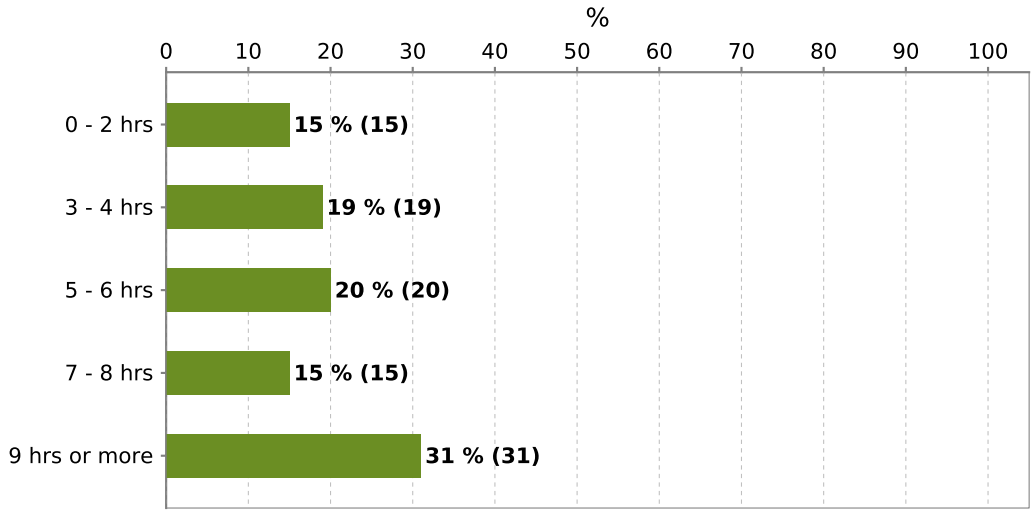


Number	Distribution	Answer choice
1	0,5%	1 (too easy)
5	2,6%	2
5	2,6%	3
9	4,7%	4
28	14,7%	5
21	11%	6
65	34%	7
41	21,5%	8
12	6,3%	9
4	2,1%	10 (very difficult)

Average (for numeric answers): 6,59

191 have answered of 423 (45%)
Maximum number of choices: 1

How many hours per week did you study course material? This means studying by yourself or with friends only. (Lectures, assignments etc. excluded.)



Number	Distribution	Answer choice
28	14,7%	0 - 2 hrs
37	19,4%	3 - 4 hrs
38	19,9%	5 - 6 hrs
28	14,7%	7 - 8 hrs
60	31,4%	9 hrs or more

Average (for numeric answers): 5,43

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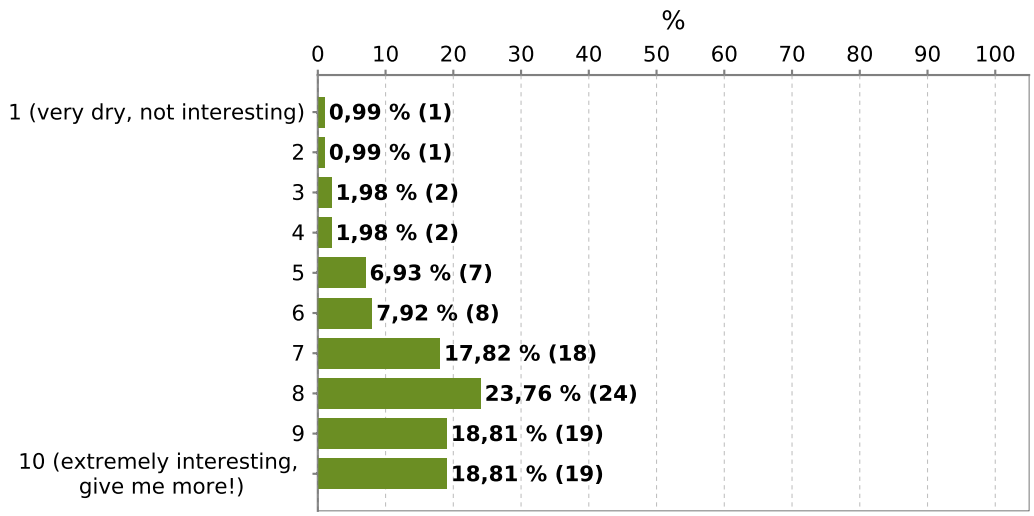
191 have answered of 423 (45%)
Maximum number of choices: 1

How interesting did you find the course?



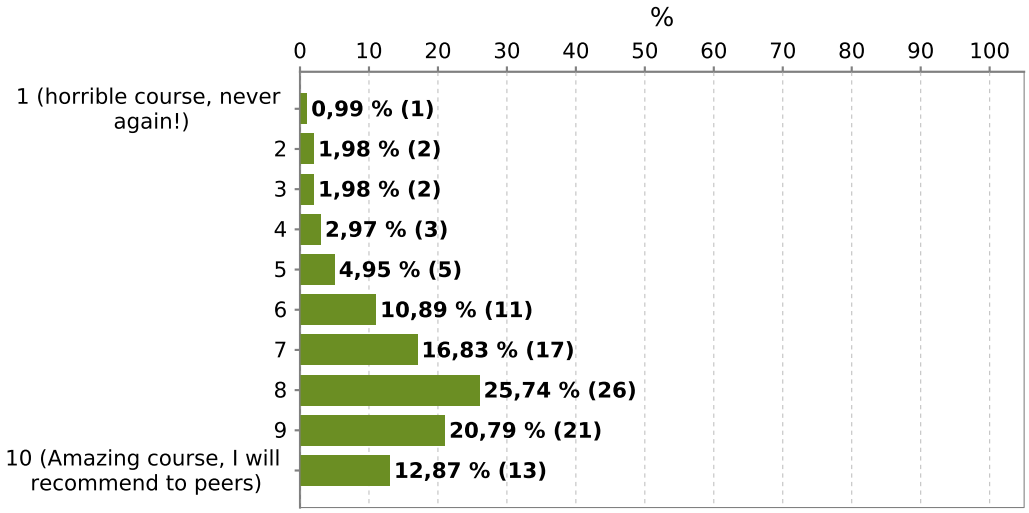
Number	Distribution	Answer choice
1	0,5%	1 (very dry, not interesting)
2	1%	2
3	1,6%	3
3	1,6%	4
14	7,3%	5
15	7,9%	6

34	17,8%	7
46	24,1%	8
36	18,8%	9
37	19,4%	10 (extremely interesting, give me more!)

Average (for numeric answers): 7,78

191 have answered of 423 (45%)
Maximum number of choices: 1

How would you rate the course overall?

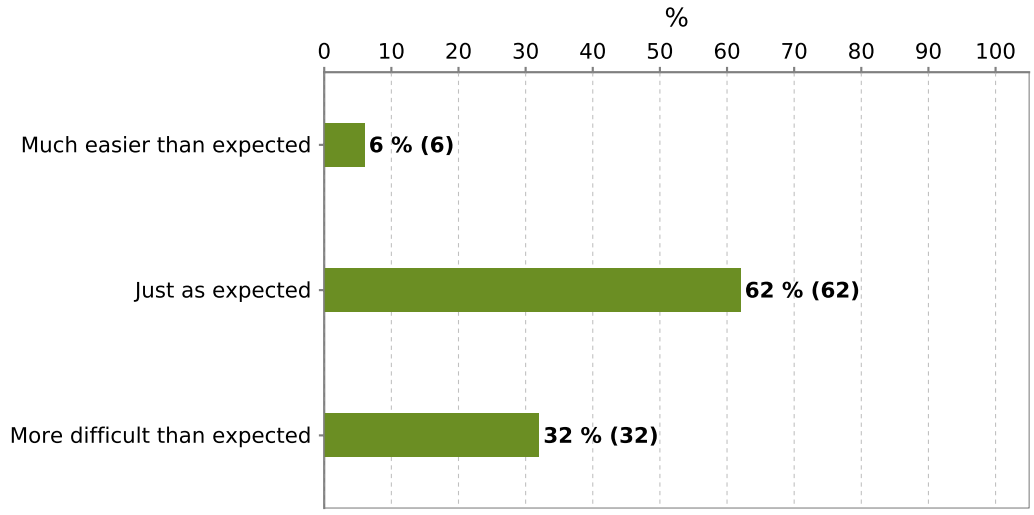


Number	Distribution	Answer choice
2	1%	1 (horrible course, never again!)
3	1,6%	2
3	1,6%	3
6	3,1%	4
9	4,7%	5
21	10,9%	6
33	17,2%	7
50	26%	8
40	20,8%	9
25	13%	10 (Amazing course, I will recommend to peers)

Average (for numeric answers): 7,57

192 have answered of 423 (45%)
Maximum number of choices: 1

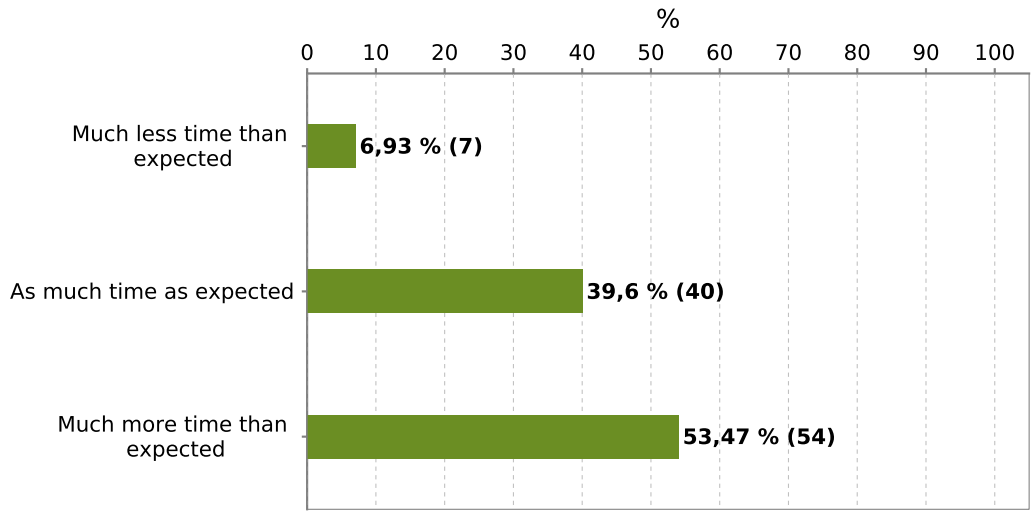
About the expected difficulty of the course...



Number	Distribution	Answer choice
11	5,7%	Much easier than expected
119	62%	Just as expected
62	32,3%	More difficult than expected

192 have answered of 423 (45%)
Maximum number of choices: 1

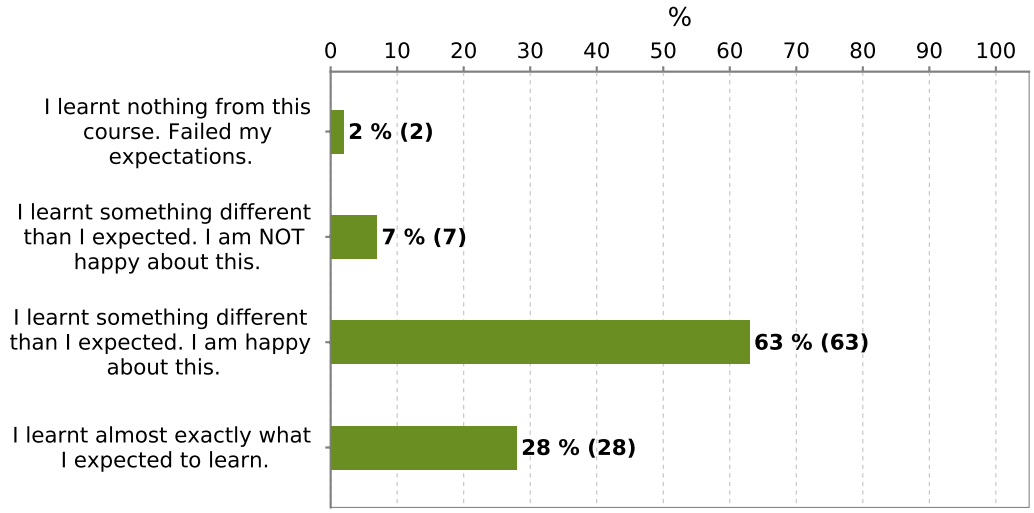
About the time spent on the course...



Number	Distribution	Answer choice
13	6,8%	Much less time than expected
76	39,6%	As much time as expected
103	53,6%	Much more time than expected

192 have answered of 423 (45%)
Maximum number of choices: 1

What best describes your learning outcome from this course?

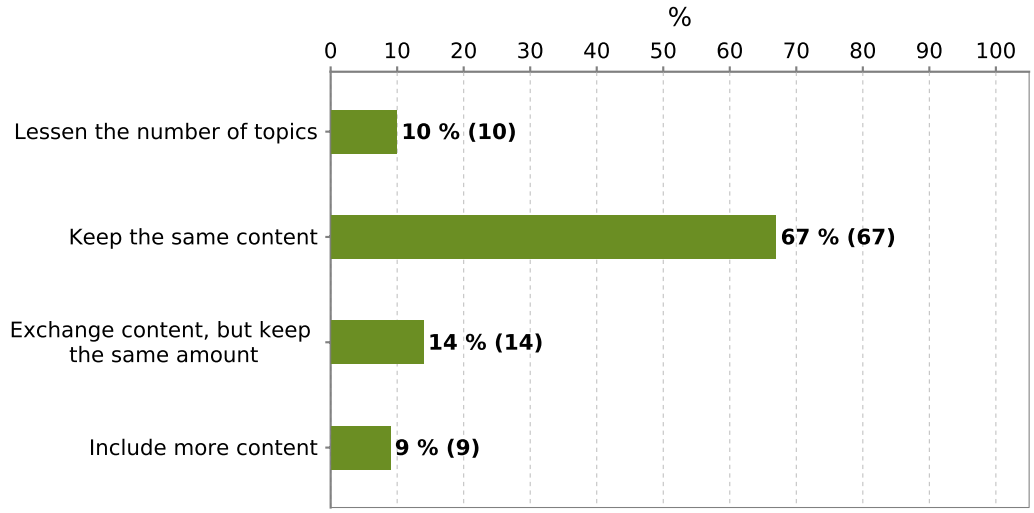


Number	Distribution	Answer choice
4	2,1%	I learnt nothing from this course. Failed my expectations.
13	6,8%	I learnt something different than I expected. I am NOT happy about this.
120	62,8%	I learnt something different than I expected. I am happy about this.
54	28,3%	I learnt almost exactly what I expected to learn.

191 have answered of 423 (45%)
Maximum number of choices: 1

How would you change the variety of content in the course?

Include in the comments, what you want to add/remove from the course content.



Number	Distribution	Answer choice
19	9,9%	Lessen the number of topics
128	67%	Keep the same content
27	14,1%	Exchange content, but keep the same amount
17	8,9%	Include more content

191 have answered of 423 (45%)
Maximum number of choices: 1

Respondents comments:

As of HW1 (HMM) being very dense, a very big part of the course became centered around this. This unfortunately lead to having to prioritize this and not being able to participate in the lectures of the other topics to much extent.

The forums are good for asking questions, but some might prefer face to face lab classes.

Perhaps slightly less topics, it is a 6 credit course. The scope seemed quite broad.

It would have been nice to have labs where we can work with and get help from the TAs.

The tutorials were quite short and only gave the necessary theory plus some tips for solving the homework. All the assignments were interesting but I found it hard to understand some of requirements and questions at first, and it seemed to me that they were mainly designed for grading purposes. The focus was a lot about passing the criteria for a certain grade level rather than learning the material where I enjoyed discussing the solutions with the TAs during the presentations. I got so much out of it, but that was not the idea of the presentations and we only had 15 min or so.

Overall, I would have liked more hands-on experience where we get to learn form the teachers and assistants how to apply the theory to solving more "real-life" problems rather than only get instructions and very limited time and focus on the grade level.

Content can be changed a bit.

the HMM labb was hard but very good description, i learned a lots from the labs

Include more practical stuff

Logic and planning not as well taught as Markov chain or games

Keep it the same as it was. Good variety.

The amount of time spend on labs was exhausting. It would be fine should AI be the only subject we studied, but for my friends and me, we had to spend nearly 40h weeks to pass the labs with a sufficient grade.

The content was interesting to me the way it was, however I would say that it would be more useful to use some of the guest lectures to maybe go a bit more in depth in the Planning topic, as I personally found it to be still rather abstract/ slightly unclear, after the number of lectures that we had on the topic. (Of course, the project helped make things more clear, but I still think that some of the guest lectures could be used for either Planning or some of the other topics - like Decision making!.)

Keep the same content! It is a nice balance and just the right amount.

Excellent course, best course at KTH so far.

Dive deeper into certain topics

I would like for you to give a real world example of this being incorporated on video and then you would go over the ai's code for what was just shown in the video. I think that would be super cool and I would love to watch!

But give more time to do the assignments

Maybe less topics would be better, I don't have enough time to master topics at last several weeks exactly.

The content is good and interesting.

The course covers many interesting aspects of AI. However, a huge part is dedicated to logic (PDDL, first order logic, predicate logic etc.) and going through an abundant of logical concepts on the presentation slides didn't really help me learn

these concepts. Would appreciate some more exercises about it.

The course had varied and interesting material.

I got paired with a guy who did nothing and 95% of the time spent in the course was trying to debug in the dark. Changing every codeline again and again and again becase "runtime error" in test case 7 or whatever is time wasted. And the individual grading obviosly wont work when we have to work in pairs and also get tested in pairs.

For a 6hp course, it felt more than a 7.5hp course. Remove the grading deadlines for labs, missing just a single deadline on lab A or B completely demotivates the student to do anything fun with the course (even no chance for project), and just focus instead to be done with it...

The HMM was well balanced

The MinMax- was a understandable but it took up to much time in comparison with the planning project.

project, started of with pretty ambitious theory and advanced application to get us inspired but a bit unclear on which level you wanted the project.
Perhaps just turn it into a ordinary assignment ? as it was now you had learned so much at the end that you would have done it completely different if you had to redo it, but there was no time for any of that.

I would remove the NLP lecture and make the lectures about Deep learning and MDP more coherent. Perhaps add a lecture about reinforcement learning in which these two concepts meet.

Your grade depends more on whether you're a computer scientist or not than how well you understand the concepts. A suggestion is to lower the implementation demands OR have separate courses for computer science and non-.

I found the content inequal. I found some topics very interesting (especially the part on the hidden markov model, which i didn't know before), and some other very boring : the whole part of logic wasn't interesting to me. I understand that it is crucial to formalize the planning problem in robotics, but we spent 2 hours on logic which is basic mathematics that I think (and hope) everyone in class had seen already before if they are in master level. So I think this part could be given a smaller amount of time, there are so many interesting topics to talk about instead !
That being said, I enjoyed the course and learnt a lot of things.

Suitable difficulty and choice of content.

Perhaps make a dedicated page on social where you can recommend other courses that cover related material that was not brought up during the current course round.
This can be very useful for master students who gained further interest of AI and could use some recommendations for when they need to pick their own courses.

Keep the same content but please change the programming-oriented approach

I'd like assignments without skeletons if that is possible.

Maybe skip NLP and other more ML-heavy stuff. Would be nice to learn about RL.

The lectures about logic and planning could definitely be improved.

However the lectures before these were great.

Change the order of the homework assignments. First simple games and then duck hunt.
In the simple game homework more focus on techniques and possible solutions then just understanding the game and coming up with an evaluator.

Logic and planning went over the head sometimes. Maybe take away some material and concentrate on key concepts.

I thought the topics were pretty good, tree searches are good. Perhaps deep learning?

I think the content was good.
However, I think some of the planning topics were a bit hard to relate to.
They seemed a bit out of place, maybe because they were so abstract. More concrete examples along the way and how you can actually use the logical systems in applications.

Most of the problems I found with the course were the homeworks. Very poorly made and not particularly helpful. While I like practice/programming oriented courses, the actual assignments were subpar

Much less focus was given to the last parts if the course (NLP, POMDP) so I feel like I didn't learn much about these topics, I mostly just know what they are about.

The content was very interesting, and very well taught. However I think the lesson on planning was a bit difficult to understand. I have to admit that, even after attending the lecture, reading the slides and reading the book chapter dealing with it, I still do not completely understand the concepts of planning. What is exactly planning ? Is it only a formalism ?How is it used in practise ?

There's an slight overlap for some students whom have already read logic courses, but the quizzes made it a breeze to just complete that part.

Hmm, not

I believe that Markov Chains and Game Theory felt like the "main" topics to me, because the labs were centered around these. I'm quite sure others could feel the same way. However, the other parts (that were quizzez) were too many in my opinion -- though interesting.

Good content, however workloads from other courses interfered a lot with the labs and thus I didn't feel I had the time to aim for a higher grade than C. Instead the course deadlines should be given more times and more students will probably try for higher grades, would have loved to finish duckhunt/checkers and made the project, but it was not worth the time since we had a lot of deadlines in other courses.

I think the having the main focus on Hidden Markov Models and Search, with the additional dive into Planning for those who are so inclined, while still giving an overview of the other topics covered in the course is excellent.

I would definitely remove some of the theoretical slides/explanations/lectures about planning. Since there was no direct assignment about them, you didn't have to code them explicitly. I acknowledge there was a project, but getting ready for the project was more a task of reading literature for the specific topic chosen.
In return, I would explain in more detail the maths behind HMM or the programming tools/tricks needed to solve HW2 (like hash table) and not just mention them briefly at the end of a seminar.

I all honesty, coming from computers science the planing part felt not so interesting.

I think it would be nice if the labs covered more of the content, and as it's currently laid out that might be difficult.
It might be nice to have the higher-grade lab parts treat other areas of the course, instead of more advanced applications of the same thing. Sort of like some of the labs in 'progp'. It would lead to a, for an attentive student, broader practical knowledge of the area.

I think he topics about NLP and Decision Making deserved more time and maybe an exercise to understand them fully. For me, it's then either doing them more in depth or not including them in the course.

It is difficult to explain, but I don't think that we learnt as many "tools", just HMM and the stuff around that. In the planning/search part we mostly had theory and not so many hands-on methods.

The lectures on logic and planning were too much theory and just a lot of formulas on the slides, would have liked to see more practical examples.

Did have time to spend as much time I wanted on this course due to student union stuff :(

the hmm labs were a waste of time and energy, completely demotivational

Excellent course, but the amount of work required does not correspond to 6 credits. Keep the course but increase the number of credits. Getting good grades in this course requires that the student has very little in other courses.

You managed to make a very interesting topic become boring. The lectures are uninspiring, because of the content but also because the lecturers have no charisma at all.

I feel that too little time was spent on explaining lab1, which caused difficulties in implementing it and taking more time. This left too little time for me to do lab2.

It would add to the course if you actually tested the things we're supposed to know about. HMMs got tested in quizzes and required basic understanding. The rest of the quizzes could be passed without hearing the lectures, directly using the slides. Thank you for

The lectures were pretty empty, giving a basic outline of things, more information would have been nice. However to do this, I think you needed more time. So, I would say either lessen the number of topics and explain them more fully or increase the length of the course.

Although I found the course a little difficult initially,it was really interesting especially the project where we could learn more and actuallt implement something interesting.

Overall I found the subject really interesting. Although starting with HMMs seemed to be a burden at first, I appreciate this change in the sequence of topics. I think it was a good move to reorder the topics so that HMM gets covered first.

I think some work on the level curve would be nice. HMM assignment is much harder than the game one, and I found the game 'C'-level task to be more difficult than the 'A' one. It was also difficult (despite feedback) to understand what a reasonable project ambition was. We got the feedback that we were shooting for the upper end, we completed about 50% and it was said to be perfectly fine during our presentation.

I felt that it focused way to much on writing agents for games. I understand, now after taken the course, that its a common subject in order to learn AI, but I wasn't very interested in that.

Within Deep learning and machine learning. Something within that at least....

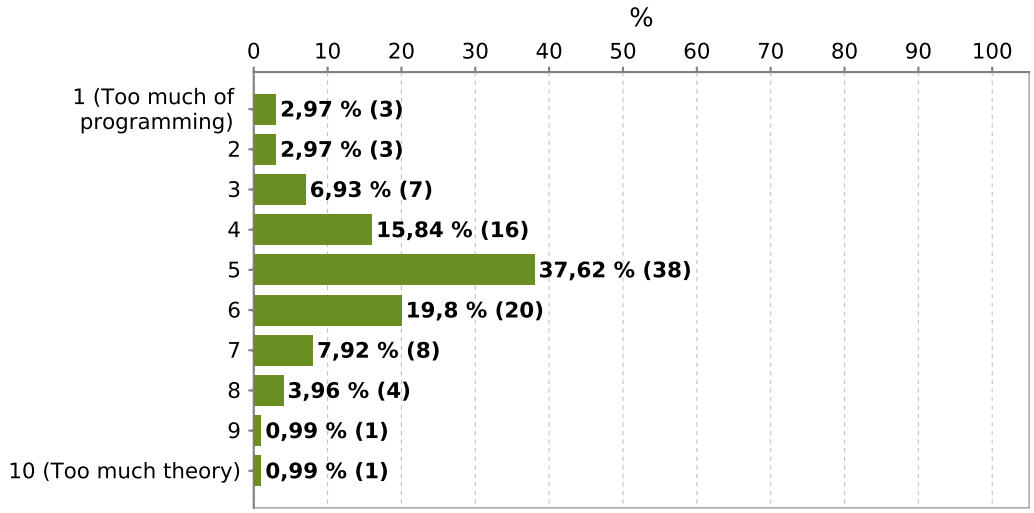
The part on search/logic/planning was poor. I did not get the point of this part. At the end I felt like I learned nothing. The slides were bad and the homework did not help to get what we were trying to learn and what was the point of all this part. Besides, at the end of day I feel like I do not know exactly was artificial intelligence mean. Instead of the ethics lecture and the essay, which I think were really useless, I suggest a lecture where we could discuss about the field of artificial intelligence in general, what it implies, what other fields it includes etc
As I learned nothing after the HMM part, from my point view the course could have be named "HMM" and not "Artificial Intelligence".

In general course contents seems to be diverse but quite balanced. I know you decided not to touch ML topics, but it would be great if you include some overview of reinforcement learning, it could be Q-learning for planning, which will lie logically after classical planning lecture. But it's again about balance, because 14 lectures on such diverse topics is already quite intense and this RL addition could just mess up everything.
However, if you place MDP lecture after classical planning and then inject RL planning lecture it shouldn't be messy. For our project I needed to learn quite a lot to understand theory and practical issues of Q-learning, but, as for me, it's really an exciting thing worth mentioning. Furthermore, it seems there's no course about Reinforcement Learning at KTH, so it is also not violating your policy about excluding repetitive stuff :)

The course is challengeable. It deserves to take and see what the qualified course looks like.

Theory vs. Practice: How do you think the course is organised now? Since there is limited time, we are constantly at a battle

to balance the amount of theory and practice.

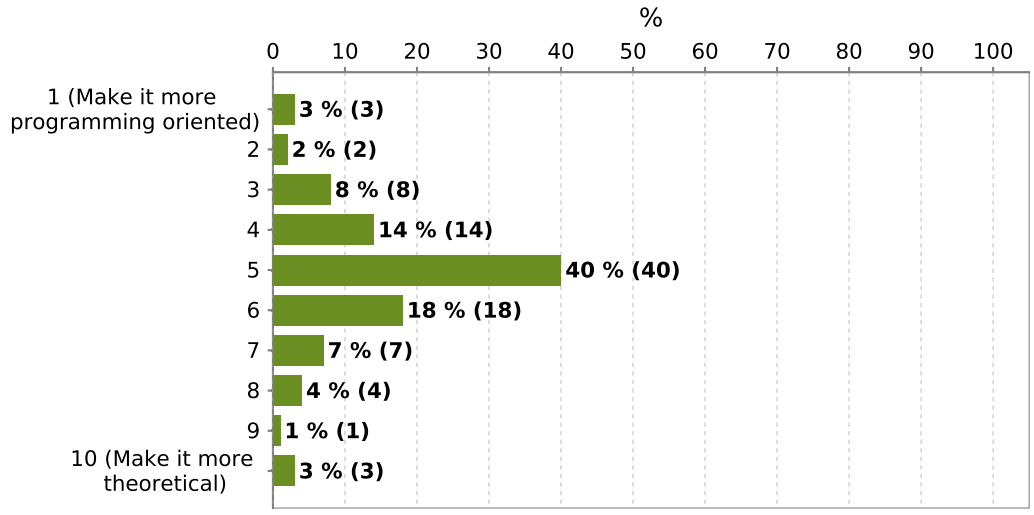


Number	Distribution	Answer choice
5	2,6%	1 (Too much of programming)
6	3,2%	2
13	6,9%	3
30	15,9%	4
72	38,1%	5
37	19,6%	6
15	7,9%	7
8	4,2%	8
1	0,5%	9
2	1,1%	10 (Too much theory)

Average (for numeric answers): 5,06

189 have answered of 423 (44%)
Maximum number of choices: 1

How would you want the course to change with respect to balance between theory and practice? (Follow up of previous question)

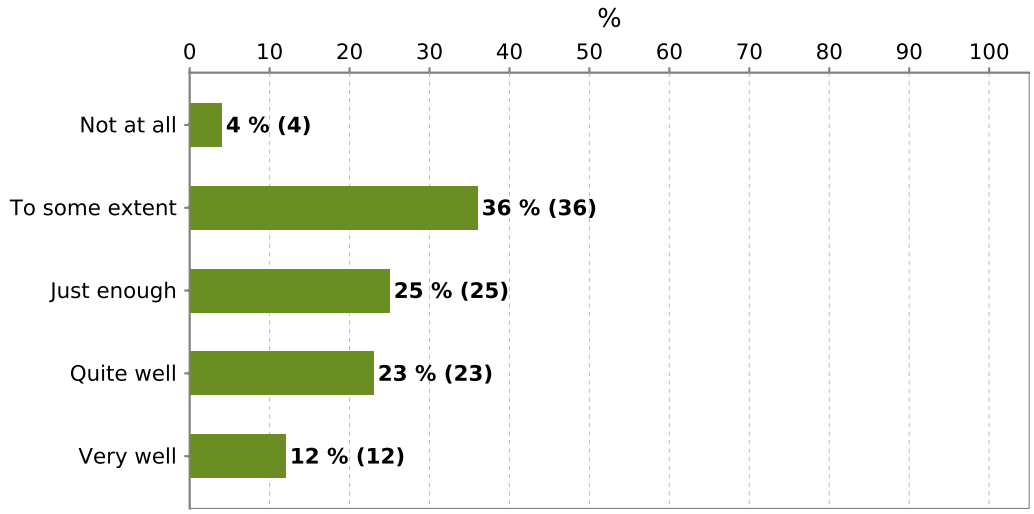


Number	Distribution	Answer choice
6	3,2%	1 (Make it more programming oriented)
3	1,6%	2
15	8%	3
26	13,8%	4
76	40,4%	5
33	17,6%	6
14	7,4%	7
8	4,3%	8
2	1,1%	9
5	2,7%	10 (Make it more theoretical)

Average (for numeric answers): 5,15

188 have answered of 423 (44%)
Maximum number of choices: 1

Did the lectures prepare you for the assignments?

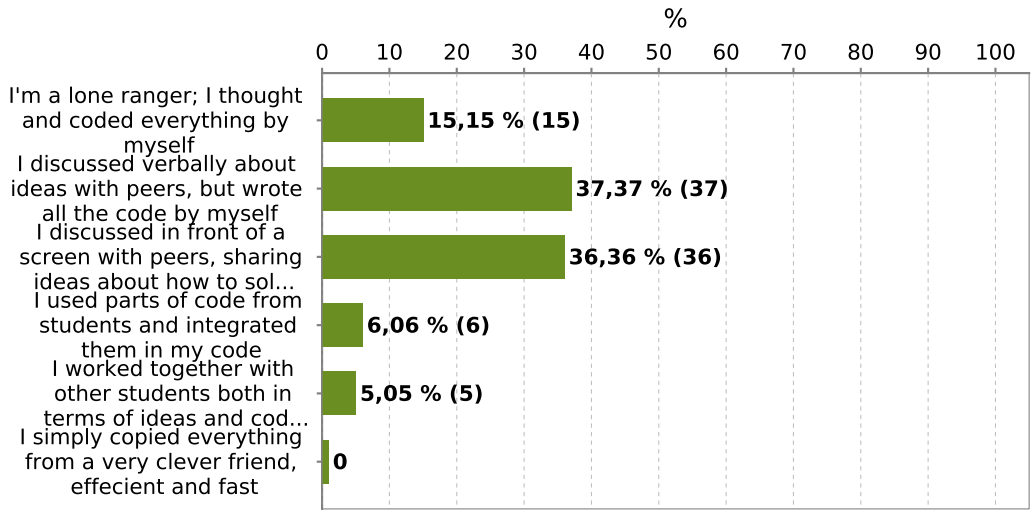


Number	Distribution	Answer choice
8	4,3%	Not at all

67	35,8%	To some extent
46	24,6%	Just enough
43	23%	Quite well
23	12,3%	Very well

187 have answered of 423 (44%)
Maximum number of choices: 1

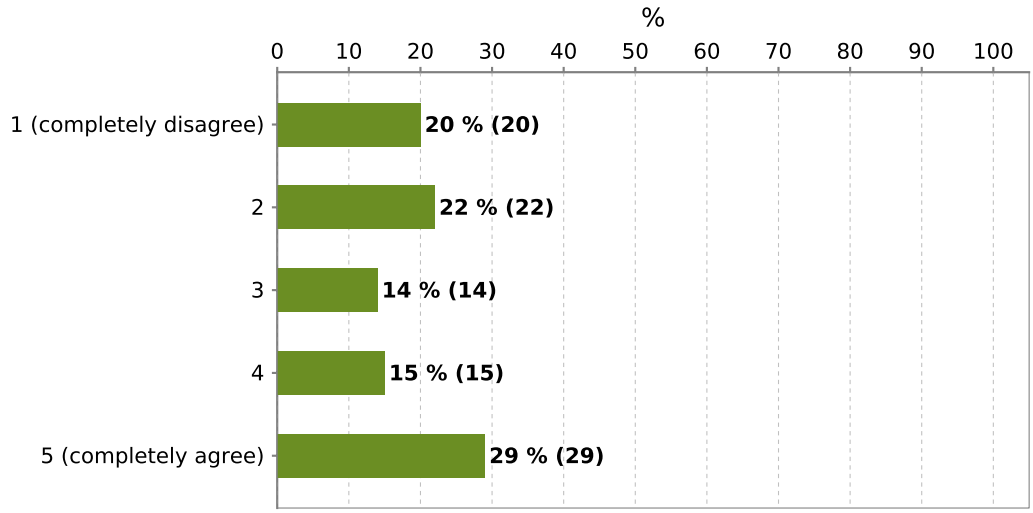
For the homeworks and project, how much have you coded by yourself and how much have you obtained through collaborating with other students? (remember that it is anonymous)



Number	Distribution	Answer choice
29	15,3%	I'm a lone ranger; I thought and coded everything by myself
71	37,4%	I discussed verbally about ideas with peers, but wrote all the code by myself
69	36,3%	I discussed in front of a screen with peers, sharing ideas about how to solve specific coding problems
11	5,8%	I used parts of code from students and integrated them in my code
10	5,3%	I worked together with other students both in terms of ideas and code, but then I changed the code to make it look different
0	0%	I simply copied everything from a very clever friend, effecient and fast

190 have answered of 423 (44%)
Maximum number of choices: 1

6hp credit points is justified for the amount of efforts this course demands of the student.



Number	Distribution	Answer choice
38	20,1%	1 (completely disagree)
42	22,2%	2
26	13,8%	3
28	14,8%	4
55	29,1%	5 (completely agree)

Average (for numeric answers): 3,11

189 have answered of 423 (44%)
Maximum number of choices: 1

Things you liked/appreciated about the course:

Text answers:

The practical experience and the diversity of material

VERY good and detailed information on the KTH social page about the course. Other courses should have this as a role model.

Very adaptable

I liked the course content, perhaps there was a bit too much but it was very interesting, especially HMM's.

It's one of the best courses that I've taken at KTH. A lot of the advanced courses in CS has not been related to research (the topic is, but the teachers hasn't done the connection during the lectures), and this was something that you did very well in this course. It was a good balance between programming the algorithms and get an insight in how they are adapted in real research.

The labs was fun and challenging but not impossible to solve (I was worried about this course since a thought that it was going to be so difficult but I actually enjoyed it very much!).

Another thing that was very good was the exercise sessions connected to the labs, a very good intro which gave me all the theoretical intro that I needed.
Last, one of the things that also gave a great conditions for passing the course was the engagement that the teaching assistants had (on Moodle). They quickly answers questions and really helped the students! Also having the possibility to read questions and answers from other students solved a lot of problems where I didn't have to ask the assistants myself. To

do this in the forum instead of a lab session really helped me.

I liked the lectures especially Patric's. They were very interesting, presenting the material in a simple way easy, easy to follow, quite inspiring.

Although I did not like how the assignments were organized and graded and that we were more or less on our own, I did enjoy solving them and I appreciate the amount of programming and problem solving.

The quizzes were a great way to better understand the theory without much pressure as we had several attempts and enough time

I even liked the essay assignment (which I usually hate). The topic was interesting and worth discussing.

This course gives a simple (in difficulty) but broad knowledge of the current AI scientific field.
The project provides a chance to work deeper in some certain AI sub-field.

Things I like :-
-The course was practical.

Fun programming assignments

the labs was amazing and the lecturer Patric Jensfeldt!

Easy submit for the code.
Quite clear assignments.

Good content, liked the fact that you are learning by doing and not just remembering a bunch of stuff for an exam. Awesome way of learning the material.

This course was by far the most insane ive ever taken. It burnt me out. Literally, i got anxiety problems due to this course and have had to spend 1-2 months at home after its completion. It is too exhausting and demanding, especially seen to the honestly ridiculously low 6hp it rewards. I loved the content, I loved the course in one sense. Its just that it was too much, too hard.

The lectures we engaging, interesting and fun, to the point that I really looked forward to going to this class. This made the course material more interesting than it already was. The assignments we really interesting as well: challenging but fun. The project was good for understanding the Planning component of the course.
Also, was happy to see a balanced gender representation both in the faculty and the TAs. :)

Interesting and fun seminars. The lectures helped a lot! I love the system with the quiz instead of an exam. Very thankful for the deadlines also. It gave us a lot of freedom to plan how and when we wanted to work.

The course could not be constructed in a better way. The thing I would like to point out is that the quizzes were fairly easy to pass without much reading.

I liked the practical example of playing Duck Hunt using hidden markov models. All of the projects were appropriate and enjoyable. I enjoyed the interestingness of the lectures; how they kept me engaged with the course.

Nice mix of theory/programming

I liked the content and that I was able to understand everything even if I am not really a math/algorithms person (I'm actually doing a networking branch). In contrast to Machine Learning.

The course content feels like stuff that really is good to know.

Really good homework and projects, which are definitely useful and interesting. But I do think we should be asked to discuss more theoretical in the report of project. Maybe the way Advanced Algorithm(DD2440) ask us to organize the project report

would be good to be a reference. (Although I love AI much more than Advanced Algorithm)

I like the course because of its subject which is interesting and current. Furthemore, Patric Jensfelt is good and it's interesting to be on his lectures.

Among the best lecturers ive encountered at kth

The selection of topics was perfect to get an overview over ai. The homework exercises helped to understand the topics ins depth.

Interesting content, good programming assignments, though extremely hectic.

Almost everything.

Fun and intersting

The second lab was great with tic tac toe. Learned quite a bit from it. You also get quite a decent feel for games/heuristics from lab2 and the lectures.

Good material. Fun assignments (kattis excluded)

The whole a.i. topic is interesting, applications and ethics were interesting, but it felt like a raw programming course in the most part, since all grades depended on just how quickly one submits the labs..

I liked that it was theory and then an assignment so you could actually do and se the effects of things, i work alone and i felt i got a lot out from it.
I also liked that the theory was tested when presenting the assignment, it meant you put in that extra effort.

The assistant held lectures complemented the main lectures nicely.

the assistants and lecturers where all good at what they do.

I think the examination system was good, there was a good trade-off between theory and practice.

The topics about HMM was new and interesting.

I liked the approach to the tenta (TEN1) with quizzes instead of a room exam (salstenta). It was different from other courses.

breadth was amazing. teachers' competence great. very interesting topics. amazing homework assignments.

HMM and the game theory parts are very interesting. Maybe some more advanced applications of game theory could be given (not to be implemented on computer but just as examples of more "important" problems, though i know the tic tac toe is just a toy problem to make understand the underlying concepts).

I liked the scaling of the grades and difficulty of the homeworks.

Interesting subject.

The labs are really good, although the grading system is a bit uneven. It feels like it is a course were getting a C demand only a fraction of the effort that getting a higher grade does.

I thought the assignments where quite fun

I trully loved the content of the course

The lab assignments were very fun and I learned a lot from them.

Fun lectures (sometimes).

Actual programming examples, not just theory.

Many different types of assignments. Very hard work at periods, but fun to work in the different project groups.

the programming part, the last lectures

Not only a good balance between theory and practice, but also a good blend of the theories into the practice. It felt like the two went hand in hand, and creating the code after learning the theories were relatively easier.

Excellent tutorials, nice content. Good to get hands on experience in implementing some of these algorithms.

I like AI, it's rewarding and interesting to study.

I especially thought that Patric's lectures were particularly informative and inspirational. The other lecturers were great as well but just want to give an extra thumb up for Patric!

The content in general was well chosen and were often framed in such a way that they sparked interesting ideas.

It was very interesting and it feels that especially Patric really cares about our learning. Only something such as commenting on our essays instead of just passing them is not always so common these days.

I really liked the evaluations. Very nice to ensure that there's an understanding to go with the code. Furthermore, the TAs could often clarify during this

Very challenging, and you got to solve very interesting problems. Implementation is always the most fun part.
The course outline was good too, with quizzes, labs and lectures.

I think there is a good balance between programming and theory. It is very interesting to do projects and to put what we learn into practice so that it is not only abstract algorithms and formulas on slides. All the teachers know their topic very well AND know how to explain it in an efficient and understandable way (which is not that common).

I've done a searching algorithm for solutions in 4x4x4 tic-tac-toe, that's badass!

The problems were very applied, we got to play with some stuff that some how felt real

Great changes from last year. I like the structure of the course in pretty much all aspects.

I also really appreciated the email reminders about impending deadlines. Thanks!

I loved Janas "project inspiration" lecture as she presented a huge field of applications and some of her research as well!

Topics
Labs

Patric was a nice teacher, I liked the labs a lot. Also, the lessons were very nice too in order to repeat everything from the lecture, especially when doing HW1 as this actually took a long time for me to grasp.

Fun labs, a lot of good lectures in the beginning of the course. (Stopped coming to lectures when the logic part started, didn't feel very relevant since we have already completed logic. Was faster to study by yourself.

I thought the quizzes was an excellent way to engage with material in a more surface oriented way. I think it works better than an exam, not only because it's so much simpler from an administrative standpoint, but it also enabled me to reflect on the material *during* the course, creating a nice feedback loop, and ensuring that I actually understood things. Of course there has to be some more depth as well, but I think that was more than covered by the Homeworks/Project. (Having that level of depth for all topics would have been infeasible, as it stands I think the course has found a really good balance).

I also really appreciated the fact that the Project wasn't mandatory this year. This seems to be something of a trend at the Master's courses which I really like, because it allows one to focus more clearly on the subjects that interest you, rather than just making so-so project "just because".

The focus on "learning by doing". Doing the assignments really makes you understand (some parts of) the theory that you

might have not understood properly in the lecture.
Having assignments that were extremely interesting, reflecting "real-life" problems.

I liked the hands on experience attained from doing the homeworks and how well integrated the homeworks were with the rest of the course.

The focus on practical assignments

Interesting topic, lectures and assignments.

Very interesting assignment problems.

Exercises helped me to understand fully the topics covered.

Patrick and Jana held very good lectures, and you are very helpful when it comes to questions and such! Good thing that there isn't an exam. The essay was very fun and interesting!

The course provides a wide knowledge on Artificial Intelligence, and we actually get to be in touch with real artificial intelligence problems.

How it gives an overall overview of the concept of AI.

homework and project were definitely necessary to really understand the concepts

I like the fact that the grade is mainly decided by the labs and that there are quizes instead of an exam.

The theoretical parts (lectures) and the homework were both balanced nicely. I really enjoyed the homeworks, although they could be quite frustrating when getting stuck (entirely my own fault!)

The only good thing with this abomination of a course was the lack of a written exam, everything else ranged from shit to fucking shit.

Complex statistic methods and logic isn't my favourite subjects. Searching is very fun though and I've applied statistical knowledge before when searching through a directed graph. The quizzes were easy and the material understandable. I feel that more focus should have been on the concepts surrounding lab1 so that students won't get stuck.

I liked the HW they were on a good level and the lectures I attended were really inspirational.

Slides were uploaded online.
When you got the hang of how to pass the course, you only had to learn about HMMs.

I really appreciate the practical aspect of the course; taking the theory and apply it using a programming language of our own choice.

Very interesting course, taught me a lot about artificial intelligence and how to apply them.

working in groups is helpful, I didn't have a partner for HW2 and that drastically hindered what I was able to do

I liked that this course has ethical part that can broaden your perspective on the topic.

i liked the way course has been structured as the difficult portions in the course got over first and it was a little easier towards the end.

Doing the project was really fun.
The Deep learning lecture was really interesting.

The diversity. I can't find these topics represented in later courses (HMM exists, but game theory and planning&logic).

Experimenting with code parameters and techniques for actual AI performing actual tasks!

I think that this course deserve more credit : 7.5hp.

The lectures provided by the various teachers were always very interesting and easy to understand.

That it was challenging and included a lot of coding.

The broadness of the course. It is suited for a introduction course to cover a number of topics and I feel like I got new knowledge in many topics within AI.

The quizzes made me learn much better

The guest lecture on NLP.

I really liked the quality of homeworks. They are really fun to implement and giving you the chance to learn as much as you want due to different grades. At the same time tasks are not academically dry, but represent a relaxed version of real-life problems. Thanks a lot!

The presentation part is good, because the questions TA asked helped us to think more

homeworks are quite interesting and complete my understanding of the concepts

The lessons about the assignment are really helpful to the knowledge on the lectures and the assignments.

The exercise classes.

98 have answered of 423 (23%)

Things you would like to see changed next year:

Text answers:

The load of the course should be equivalent to the number of credits

Making the homework assignments less time consuming, thus letting the students have a chance to learn about about the other important topics in the course.

A longer time to do duckhunt, I came from physics and the transition to cs took some time for me so we didn't have time to do duck hunt.

Little clearer on what you are expected to know at the labb presentation.

I think the fact that I had to code in C++ with no external libraries and submit to Kattis made the coursework take such a long time. Since I was spending all my time on the coursework trying to get it done for the deadline I missed a lot of the lectures. I am not exaggerating when I say I spent approximately 60hrs on the first coursework and I didn't get to the duck-hunt game. I didn't think there was any value in requiring me to write my own functions to read from an input, write to an output, as well as various vector/matrix manipulations. This alone took me several days to get working. I would also note that in all literature I found and the Stamp tutorial, all parts of the algorithm where written in the format of individual elements, not vectors or matrices. By this I mean the natural way of implementing the algorithm is to use multiple nested loops. So I feel there was no need to create functions to multiply, transpose, dot product etc. matrices. This felt completely uneccessary. I wasn't even sure how I would even use the duck hunt code. There was a one page description of the different types of birds on the Kattis page but next to no explanation of how to use the source code for the game. Other courses have coursework where we use python or matlab to get several modules working. For comparison courseworks in other 7.5 credit and 6 credit courses done in matlab to learn an algorithm usually take maybe 4-10 hours, definitely <20. For a 6 credit course the coursework was disproportionately time consuming and an inefficient way of teaching the material.
After putting so much time into the courseworks I was definitely not motivated to attempt the project.

Other than this I thought the course was great, the content was very interesting and well taught. I think because I spent so much time on the two courseworks that I ended up missing a lot of the material from the rest of the course (logic, NLP etc.)

I would like a set of problems given for the project and more clear requirements. I think it was extremely hard for someone without prior experience in the field to identify a good problem and set the project scope on our own.

Again, I would prefer a different setup for the homework assignments. Having such a short deadline was very demotivating and the difficulties came not from the problems being very hard but from understanding what the problem was and what was required.

I did not enjoy the strict requirements of having to work in pairs and having exactly 4 people for the projects. The programming part of the homework assignments could not be equally split as they were necessary for understanding the next task. Either both people could solve the tasks individually which defeats the purpose of having pairs or as in our case one of the pair solved almost everything which was not fair. I think the pairs only made sense for discussing and answering the questions.

I think the course was very time consuming which I wouldn't mind if we were to receive more credits for it.

nothing special.

Fix errors in code skeletons. I don't feel I learnt much from the second hand of the course , since there was no lab in logic and planning

better labs than tictactoe. and more structures TA's. feldt like some of them were lazy. hard to get an A in the course due to time limit.

order of assignments

The way planning, logic and NLP are taught.
More guidance for high score in assignments (parameter tuning or insights).

Nothing special.

Reduce work load AND/OR bump up the 6hp credit. 7.5 should better justify the effort, even though I feel that is low still.

Spend a bit more on planning. PDDL for example is still a very abstract concept for me. Maybe including a small assignment on Planning would help apply some of the concepts as we are learning them. And that would maybe give us a better idea of what we want to then work on for the project. However, time is limited, so I understand this might not be logistically feasible.

Nada!

There was no actual pedagogical support in this course. This is the first ever CSC course I have taken that has no help sessions. The teachers did not want to answer questions during the question-sessions at the tutorials. This I would like to change.
To only have 3 tutorials is not enough for the complexity of the topics. For example a tutorial on Logic would have been preferable.

I want examples of code being written in class.

More time/tips to do the assigments (and the project)

I think I have never experienced a course were the amount of HP is so far off from the amount of work. To get an A or B in this course is a joke. The project is basically as much work as an bachelor thesis which is 15hp. I do however not want this changed for next year. I want all students under me to go through the same suffering we had to. I bet they will ask me for solutions for this course's labs as they are really spoiled....so if you are going to change anything, please create new but equally hard labs ;)

Requirements of project report, it should be more theoretical instead of just consider about the Kattis score.

The quiz can be done in pairs and thus will not lead to learning. Furthermore, the quiz can be attempted several times and that leads to only guessing the correct answer. I have not learnt that much as I expected from the quiz even if I didn't guess instead searched for the answers in the book and slides.

more lessons, and lab hours with help specifically for AI.

Kattis is grossly underutilized! Very hard to know what part was done wrong!

Less homework, more guidelines for the final project

1. More time for the homework and more time for the project. Everything felt extremely stressful.
2. More exercise sessions about things not covered in the homework.
3. Clarify some instructions in the homework. E.g. in duck hunt, explicit mention that Kattis will put opponent's observation in.

Perhaps a little more theory.
There was apparently a large discrepancy between the TA's and according to many other students I spoke to, one particularly unpleasant TA. I did not encounter that but it is worth looking into!

I didn´t feel that I had enough time to do labs and project and it all got very stressed. Maybe not only because of this course but because all courses had deadline at the same time.

The first lab is a bit dry below the B grade. It would be more fun if it wasn't just a generic markov model. I know you probably want students to implement the HMM stuff for arbitrary sizes of A/B but if the stuff actually meant something it's both easier to think about and it would be more engaging.

Drop kattis or remake kattis so that useful error messages are given. At the least make sure that the arguments given by kattis works. We cant just guess that one of two input arguments will be faulty when running our code.

The amount of work required for the lower grades is way too small compared to what is expected for highef grades. It is possible to pass the course without learning anything

The grading system, where grades A and B are only based on the lab deadlines, and if one misses one, then you only get a C in best case, and not even having the chance to do a project..
Since you make the project not compulsory, then why is there a project qualifier in the first place? I understand the project qualification through quizes is a good chance for those falling back on the labs, but this is completely unmotivating for a student to focus on the project in this case when the highest grade still is C..

There should be more assistance for the homeworks.

For the assignments: I know Spotify gave you shit about the "creativity" and "problem solving" skills of the students, or rather the lack of such skills. However I had more problem with misinterpreting the assignments then understanding the theory, You don't have to hold our hand and say "use this algorithm here", but it would be nice to at least understand what is tested or how it is tested. Some clarification could be done to the "duck hunting assignment", as you said in the projects "pictures would help"

and perhaps some documentation for the checkers skeleton as well, since almost everybody i talked to had the most problem knowing which player they were, sounds idiotic, but it is nice to help the idiots.
And what was the deal of even mentioning iterativ deepening, hash tables and move ordering when none of it was required to pass through kattis? That led to some awkward discussions with the lab assistants "how did you make you code more efficient other then pruning? - Nothing. - Hmm, don't know if i can pass you then."

Project: Specify the level you want it to be or make it into another assignment. Rather rude as it is constructed now.

I would like to have 3 lab each being smaller. This would allow for not performing as well on one lab and compensate by doing very well on the other 2.

Too many things to do if aiming for A. Project was extremely difficult and harshly evaluated. Almost no preparation was given by lectures for A grade on labs.

Your grade depends more on whether you're a computer scientist or not than how well you understand the concepts. A suggestion is to lower the implementation demands OR have separate courses for computer science and non-.
Lectures should be more about how to do the homeworks. There should definitely be more help-sessions (exercise sessions). Now they come too early to ask for hints/help. Several classroom lessons can be replaced by Wikipedia, in favor of occasions for the students to talk to teachers. The only time I ever talked to teacher was for the project presentation. That's not good, because they're the best to answer your questions.

Nothing springs to mind.

Make the TA's tell the students which grade they are receiving during the presentation of labs, and not after to hinder any unpleasant surprises.

I think that the project should be left out, and maybe replaced with a not to demanding lab. Most every one I have talked to have felt that the work load of the course far surpasses what its 6hp justifies.

Maybe have some more info about the project earlier
More exercise slots

I would love to see different assignments that are not focus on the coding part but on the comprehension of the course's content.
Furthermore, I think that in the logic part the teacher should use the blackboard than the ppts. But I understand that due to limited time that may not be possible.

Change the project into a lab assignment. If it is on the same level as the other assignments I suspect more total knowledge will be gained.

In some way reduce the time needed to be spent on the assignments. More than half of the time on Duck Hunt was spent tweaking parameters. While an important lesson to learn regarding real life applications of machine learning, possibly not the most efficient way to spend time on the course. Likewise for checkers, even though the total amount of time was less than for Duck Hunt.

Look into if it is possible to balance the work load on home works. HW1 took more than 2 full weeks to complete while HW2 only took one day.

Switch the order of the assignments. Improve feedback from Kattis. Most of the time feedback is near useless, except for saying it doesn't run or is wrong... Fix load balancing on Kattis. Kattis is definitely not time deterministic, and close to homework deadlines the overall system slows down and thus makes verifying solutions, that are close to time out (especially per round), almost impossible, because the system can't keep up.

More focus on knowledge rather than keeping strict deadlines (A-B grades).

The way the Kattis rating influences the grading:

Implementing algorithms is nice and cool, also playing around with heuristics can make fun. I needed just a few hours for both reading and implementing the assignments correctly without any help for the level C tasks. However, the A part instead took several complete working days, and most of them was "guessing" a 'the right' heuristic. That is really no fun at all! IMHO, if you want an A to be a hard but fair thing, you should just add another (more) difficult algorithm to implement, that may have not been presented in lecture (in detail) for example.
Furthermore, I experienced that, if one has "passed" Kattis, one got an A, even if the oral performance was not really convincing.

So I think the programming part can be made larger, but less tricky for an A, but the oral exam should be harder.I experienced that, if one has "passed" Kattis, one got an A, even if the oral performance was not really convincing.

So I think the programming part can be made larger, but less tricky for an A, but the oral exam should be harder.

It would have been lovely to be allowed to do HW1 in Python.

Increase the number of credits in the course. Consider giving longer time for the duckhunt lab.

Things that could change:-
-Amount of workload.
-More reasonable deadlines.
-Lectures can be more detailed oriented, less complex and more explanatory.

Less emphasis on particular Kattis scores, less emphasis on responding with set phrases to the questions in the lab presentations (the TA we had for the second lab would not accept our answers unless we said exactly what he wanted, even though we showed _clear_ understanding of the questions; he examined us for 40 minutes and still gave us a B in the end.)

The project. I finished all laborations in time and qualified to the project. I worked on it together with my group 24/7 for over a week but never got our implementation to work, the day before the deadline the three other people in the group decided that they didn't want to keep trying so we had to give up. I*m not sure if we would have been allowed to present our progress that far or not but it felt a bit frustrating to have spent that much time and in the end receive the same grade as if I had just done nothing after homework 2 was finished. I did learn a lot from doing all the research though and I'm sure I would have given the project all my thumbs up if we had managed to finish it..

Quizzes
Homework

The difference in required amount of work to reach certain grades felt too high. To simply pass the course with E-D it is possible to just implement some pseudocode. For C you actually need to think and especially on lab 2 spend a lot of time to pass in Kattis. For AB you suddenly have very strict deadlines, need to do duck hunt, checkers and a project. Ideally I feel that the difference in the amount of required work should be smaller between the grades.

The homework assignments. Also get rid of the formal planning (like PIDL) part of the material. Very boring and didn't seem to be too helpful

Maybe distribute the focus of the course a bit more evenly among the different topics.

I think this course recquires much more involvment and work in order to get a A grade than the other courses. It is not my case but I believe (after discussing with other students) the grading method does not motivate people to do the grade A and B requirements in HW1 and HW2 since even if they do they will only get a C level grade if they do not present or pass the project. I think the grading method should enable people to get a B level grade even if they do not pass the project because doing the quizzes, the essay, and HW1 and HW2 to a A level grade already recquires a huge amount of time and work spent on the course.

In my opinion HMM was difficult to grasp for a long time, but the lessons were glorious. Maybe create more exercises and examples which students can look at :)

I liked the early assignments in HW1 maybe add similar ones to HW2

While I felt that the course's structure was great, it felt unstructured in some ways. For example, it was unclear what you had to redo from last year and problems with Rapp. Most questions were answered eventually, but then not entirely clearly.

Nothing really!

More help from Kattis or FAQ with common problems as alot time took to understand what went wrong with the kattis submission.

Smaller project in order to get A, in total this was too much for a 6hp course. It's quite easy to get a C, but almost impossible to get A.

More time to complete labs in order to be able to aim for higher grades.

I think the initial deadline for getting an A on the first Homework was perhaps too tight. I do think that starting with HMMs rather than Search was absolutely the right decision, but I know the deadline demoralised some people.

A bit more focus on the theoretical (mathematical) explanation of concepts. Since I have a background in Physics, these moments in the lectures of "this is the final formula, you will have to believe me" sounded a bit weird/inaccurate. The "physical" explanations of many of these formulas was very good, though, giving an idea of what concepts they relate.

The lectures about search and planning felt very, very dry. I guess it is a dry topic, but still it felt like I could have been spiced up. Maybe a small practical assignment on PDDLs could help.

Better framework for the labs so that less time should be spent tweaking parameters. Perhaps more steps in the assignment could make it easier for students to know if they are on the right track and need to tweak their algorithm or if fundamental changes are needed.

I felt that my duck hunt solution was more a product of infinite trials and errors rather than a knowledge-driven solution. Help us about that!

More methods and algorithms to implement (like a-star search, more heuristics...)
I don't really feel like I "know" AI after this course, I wouldn't really know what to do if I started working with it now. But this is a basic course so maybe that's natural.
There isn't anything new and more difficult you have to do to be on the A-level in the labs, then if you just went for C. To get and A in HW2 for example, the only thing you had to do was to make a new heuristic, no new algorithms, methods or anything was needed. The only thing is if you want to keep trying, I don't feel like that is what you should do to get an A.

For the programming assignments, the code is tested in some sort of black box that doesn't give enough information on how good is the code. For example on homework 2, we could very easily get a score of 19/25, but still we were far from getting 20. The assignments are not much about Artificial Intelligence, but more about testing dozens of configurations and spamming Kattis.

I think the secret test cases on Kattis for the HMM tasks might have been too easy. You could pass all HMM tasks, but still have problems with Duck Hunt because you had some slight bug in your HMM...

I think it was useful to implement HMM ourselves, so maybe you can keep that part, but still allow us to use a pre-implemented HMM for Duck Hunt? It was very difficult and time-consuming to figure out what your low Kattis score on Duck Hunt was caused by...

nothing, I think this course was excellent the way it was!

remove hmm tasks, they were essentially copy-paste tasks with error finding (which is impossible in kattis)

getting rid of Kattis :) or at least don't do preselection of grades according to a score on Kattis.
We needed too much time to adjust our code to Kattis to get a certain score. Most of the times the code worked perfectly without this Kattis optimization but it was just necessary to get the specific grade. However, this kind of minor optimizations, for instance deactivating advanced techniques which would just take too much time or making a "lower-equals" out of a "lower" sign etc..., just take too much time to be worth it and don't help me understand the topic in any way. In contrast, it even harms because we had to invest weekends just to get a score on Kattis.

I had the misfortune of ending up in a very lazy project group. Two of the project members basically did nothing at all, did not communicate, and could not keep deadlines whatsoever (we even had to reschedule our presentation since one member did not respond before the deadline). They started working (for real) the day before the project deadline, even though I really tried to organize everything and set up collaborative tools to enable a good division of work. The third project member did reasonably well and did help out a lot, but in the end I ended up doing pretty much the core parts of the project by myself.

I understand this is of course how it sometimes is, but I really dislike the fact that my final grade is dependent on other people. Now I ended up having to do a lot of extra work to get my A. Maybe this is something you could change in the future? I really feel that a traditional exam would be a perfect fit for this course with all the great theoretical content.

Everything except the quizzes. Redo the whole course layout, get people that haven't had a thing to do with the course come with input, you need fresh ideas and perspectives.

More focus on the concepts surrounding lab1 with examples on B-pass, Viterbi and gamma-pass.

I think that the online quizzes were to easy. I think that it would be better to have an exam or KS (due to my schedule I couldn't attend most of the lectures and I didn't have the course literature) I shouldn't have been able to get a C in the course. I would have liked if there were some help sessions for the HW.

It would add to the course if you actually tested the things we're supposed to know about. HMMs got tested in quizzes and required basic understanding. The rest of the quizzes could be passed without hearing the lectures, directly using the slides. Thank you for making the slides available.

For the laboratory exercises, the first one was mainly learning how to add matrices. I'd suggest you adjust it to let us learn algorithms and concepts instead of adding numbers in a computer. Also, I spent about 48 effective hours on HW1 before I realized that you shouldn't learn anything to pass it. The algorithm for passing HW1 is: look at the stamp tutorial mentioned in one comment in the PM. Implement the algorithm from the pseudocode without thinking. Remove the edge case, it fucks up Kattis. Now Google Viterbi Algorithm and Baum-Welch. Present. Win.

HW2 was nice, I liked it. Simple to get started, straight-forward and focus on understanding.

It feels weird to pass a course where you presented like 10 algorithms in Markov models and planning and god knows what, when all I actually know is vaguely how Viterbi works, vaguely how Baum-Welch works, the geist of Markov and the definition of a heuristic.

Change this to 7.5 credit course at least and TA's who are actually good at standing in front of a larger group of people and teaching.

MORE TIME FOR HW1!!! This cannot be stressed enough - 2 weeks is NOT enough. HMM1-HMM4 alone took a week to finish (though I did have other things to do in parallel this course, but I am sure other do too). Although HMM1-4 was quite easy, duck hunt is not and requires much more time than 1 week -> 3 weeks for HW1 would be better.

Less enforcement of Kattis grading and more of understanding material

I pretty much liked everything.

Project could be made mandatory with some more time allowed for the same. So that everyone could do some important learning through hands-on experience

Strict deadline for A and B in the homeworks, can maybe be a bit less loosened.

Better level curve between assignments.

More "visceral" homework tasks. I deliberately put off the 3D tic tac toe for a long time and stuck with the 2D one. The 3D one is not as interesting since I find it hard to visualise it and play against my AI. 2D games are probably better suited for the kind of experimentation I wanted to do.

time, two months for this material is too short to digest

Since home assignments constitute the main part of the final grade, lecture should provide more implementation tips. Moreover, I know that having the assignments presented by groups of 2 people reduces the amount of work necessary to the homework evaluation, but I don't think it is a fair strategy: I ended up working with a person who could not keep up to speed with me and so I was forced to do all the work by myself, but, at the end of the story, we got the same final grade.

It is good as it is. Maybe a little bit more on the topics of ML/Deep learning, so one can get a feeling for those algorithms also. Not just guest lectures, which indeed were very good but made one interested in trying it out oneself!

Better course administration. Or rather the tools for administration. Rapp is a very outdated system and it could perhaps be

changed to the new Canvas system or social.

Some way of getting feedback on the homeworks. We got stuck on HW2 and couldn't get more than 95 passing tests. It was basically impossible to figure out how to get past the last two tests needed to get a C. Ended up becoming less about theory and algorithms and more about brute forcing.

Quiz for every lecture

All the part on search/logic/planning was poorly presented, the material was bad, I did not see the point of it, I have learnt nothing. Please make the material better and convince the students why it is relevant.
I would have liked more theory, the lectures are too short, I feel like reading a wikipedia page would have been more efficient.
The essay assignment should be removed, the feedback is clearly useless (anyway that is just insane to read hundreds of essays and give constructive feedback), the lecture was enough, even though I think it is useless.
The project should be reconsidered, the learning outcome was not clear, the evaluation was not clear.

Increase the number of credits to give students fair understanding of workload :)

The code has some misleading comments.

More credits for this course

More communication between the teachers and students

More specific topics

Less PowerPoint based lectures. I have a hard time following PowerPoint presentations and prefer the black board.

100 have answered of 423 (23%)

Include any overall comments for improving the course.

Text answers:

Adding more foundation material even as video lectures

increase the difficulty of the quizzes.

a great course!

Very good course.

use some of the guest lectures to go deeper into one of the topics (planning, making decisions).

Don't have anything to say...

Most things in this course I learned from watching online lectures and exercises from MIT and Stanford. KTH provided the formal examination, but not the learning experience.

I felt like I spent more time and effort than a 6hp course, content is good but it should be 7,5 hp

The amount of HP of this course should really be increased.

Well it's pretty good exactly.

Maybe more labs, less theory and do something about quizzes to make people learn more.

The lessons (in smaller groups) were very good, but the labs took so much more time than expected, which took time from

the rest of the course. We read two very lab heavy courses at the same time (Machine learning), which made it difficult to have time for theory.

I think it's a good thing with the quizzes, but I would like to have more lessons, to really get a grasp of the concept.

Also lab help would be good. Because the assistants at Open help hours didn't know anything about this course and couldn't help if you got stuck. And that took a lot of unneccesary time i believe.

The amount of work necessary to get an A was to high. Getting an A was more about outworking the other students than really understanding the topic in depth. Apart from that the course was a great introduction to ai.

Both Jana and Patric were good lectureres and have handled the course brilliantly in my opinion.
Some small things to note however:
During her lectures, Jana frequently breath heavily and sighed into the microphone rather loudly which made me incredibly sleepy.
During the project presentation Patric looked severly displeased to the pointed where he almost looked angry. I think it is the facial expression of him concentrating though, but some of my teammebers were a tiny bit intimidated by it.

I want to emphasise again that they both did a splendid job with the course.

Interesting but stressful

See above.

First course that I have encountered that is built like a old school time race.
Do this part by this day next week if you want this grade! Oh you missed it? Come back next year.

Feels like a stressful environment.

I think there should be something said about reinforcement learning. It is on the rise today and I think it should be part of a modern AI course.

Keep doing what you do.

Give more credits for this course.
Have teachers help students understand though active rather than passive sessions.
The homeworks are amazing, but terrible if you get stuck in ridiculous programming-problems. There should be (paid) help available for this.

One idea is for the TA's to ak more about the code and implementation.

I really liked the course, both the content and the way it was thought. I do however feel that the amount of time I put in to it surpassed the 6hp that was awarded for it greatly.

The exercises were very crowded, perhaps add some more slots for these if you have a lot of students again.

There were many scheduling collisions with other courses within the same master, try and avoid this next year.

Providing any kind of solution or solution sketch for the big homeworks like checkers and duck hunt. If you couldn't figure out how to get over a specific score, you can't get any better because you don't get presented with a solution in the end.

Also about duckhunt make a grading based on score. Not only 400+ for an A and the rest gets left out...

The logic introduction lecture (7) was really basic and hence not interesting IMHO. I think this time should have been spend on the Math behind HHMs.

Have a look on how it could be easier to get a B when done with C level. It seemed like a big step to make the A level assignment when trying to achieve a B, so I just stuck with a C instead.

The project was way too heavy.

Maybe the lessons about planning could be slightly improved by better introducing what planning is exactly, an what is its use.

Longer deadlines for A-grade, I got C because I balanced other courses on top of this.

I felt like the course leader would need more time on hand to make the course feel a bit more structured. Other than that, great course!

A very interesting course that introduces the student to AI

Longer time to complete deadlines.

The scoring system used in the homeworks felt rather arbitrary. It was very frustrating to keep working on an assignment because I lacked one single point.

Ask for a lower score on Katthis, for TTT3D and checkers.
For both, I (and lots of people) stayed stuck for days at 1 point to the expected result, and this is very frustrating.

Also give more support to create project groups. It's very hard for international students to find partners in such conditions.

Make a clear schedule at the beginning of the course to show what we are going to study. Also make a final recap where you show how all the stuff we learned is connected

I liked the course very much but i think the amount of time spent to be able to do the project and make HMM1 resp HMM2 are to high or dealines to though. We tried at first to go for an A, but just missed the deadline on the first because an initial bug in the given skeleton code and also later some missing points on kattis that took time to fix, the same on HMM2 although we got an A(B for week late) on the first and C ("because late on first led to late on second and thus we had to skip A) on second, both would have made an A if reasonable time were given considering working hours. To be able to get the assignments on time people were working 24/7 , which for me as an older student with kids is impossible and thus unfair and discriminating (Same with project).

I also generally think that it is not fare to receive the least grade, thats just mean and i cant get that policy (i know the arguments but don't agree). I think we in my group deserved a better grade, as for now we get the same as a person who only did the basics and turn them in after course end.

Basically, the one thing you need to get an A in this course is TIME! I don't know if that is very good,

The project was very time consuming, and resulted in a very large difference in workload between students aiming for E-C and B-A. The course workload is supposed to correspond to 6 hp for everyone, so I think that is a bit of a problem. Not sure how to resolve it though.

keep it as it is... except maybe replace checkers with chess!

focus on AI, not matrix operations and implementation

I felt like there was not much time for finishing the A-part of the lab which meant that once you missed one, you felt discouraged to try for A in the next lab or even go for the project.

The labs sucked and only provided uncomprehended, stupifed and terrible misery. Rewrite the lab instructions so people without severe autism can understand it without spending a day trying to understand the instructions. Make the connection to AI clearer and try to make them actually FUN.

Add general abstract reasoning about algorithms. Add motivation for why this is in the course and how it connects to other areas of AI. Shift the focus of HW1 to understanding. Test understanding.

Already mentioned

NA

Any feedback that Kattis can give on what's wrong will improve pedagogical value I think. Perhaps annotate exceptions a bit?

No comments

I like the idea of continuous examination via the quizzes, however I feel that the project and its deadlines were rather hard to complete. In the beginning much time was spend on HW1 and understanding the theory and finding a project group and planning a project simply was too much at the time.

I'd like the professors to state why HMM and search/logic/planning plays a big part in AI.
I would like the professors to give clues on how we could learn more about artificial intelligence. Because at the end of the class, my point of view is that artificial intelligence is just about HMM and search. (I attended all the lectures, all the guest lectures, all the tutorials). The guest lectures were good but I did not see the point regarding the classical lectures.

The grading criteria is not so fair. It's too hard to promote to B from C

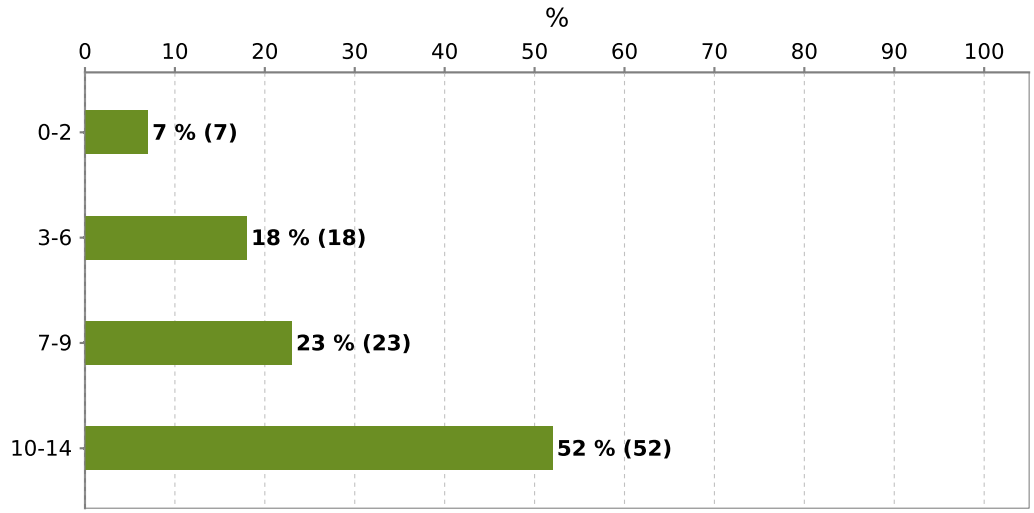
Maybe change the evaluation for project, give some credit for the efforts

I wish some office hour to solve some confusing problems about the lecture.

Project team is crucial for this course, but most likely one needs find partners himself. This is somehow making the final grade depends on if one got reliable partners. It is not fair. If I can find reliable partners easier, I could have higher grades.

54 have answered of 423 (12%)

How many lectures did you attend? There were 14 Lectures.

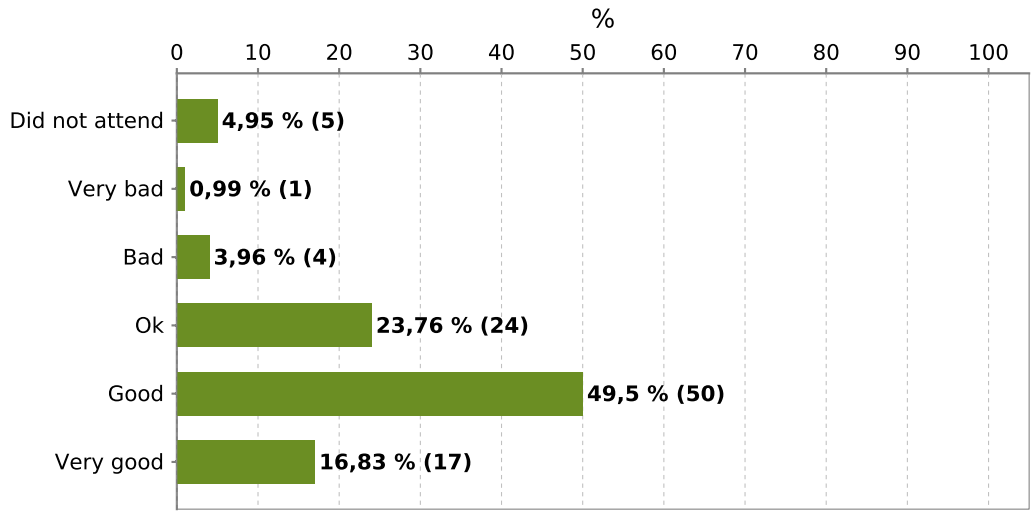


Number	Distribution	Answer choice
13	6,8%	0-2
34	17,9%	3-6
44	23,2%	7-9
99	52,1%	10-14

Average (for numeric answers): 7,37

190 have answered of 423 (44%)
Maximum number of choices: 1

What do you think overall about the lectures?



Number	Distribution	Answer choice
10	5,2%	Did not attend
1	0,5%	Very bad
8	4,2%	Bad
45	23,6%	Ok
95	49,7%	Good
32	16,8%	Very good

191 have answered of 423 (45%)
Maximum number of choices: 1

Respondents comments:

It depends on the teacher

Good and informative lectures with a lot of useful content.

engaging, interesting, very useful for understanding the material. both instructors were really good!

I think the speed was too high. That is, the lecturer would cover the concepts too quickly, taking for granted we knew in many cases things that we didn't, which lead to impossibility of understanding the further explanation

They were fine, but as the labs took all of my time I didn't have any time to attend later lectures.

Pretty good, I attended almost all the lectures and learnt a lot.

In general I think Jana should try to make her lecture a bit less theoretical, perhaps by going through some examples on the blackboard and not just going through the presentation slides. I like when she showed examples of different search algorithms, would be nice to see more interaction of that kind. Really like Patric's lessons.

As aforementioned
During her lectures, Jana frequently breath heavily and sighed into the microphone rather loudly which made me incredibly sleepy.
Also the slides were not very visually appealing much of the time.

The first ones were very good

The lectures from Jana were boring and monotone, since one could just look at the slides and learn everything. The same applies for Patric's LATER lectures, where he felt demotivated and just read through the slides. I stopped attending some lectures for this reason.

Some of the guest lectures were not bad. The subjects didn't connect to the rest of the course and didn't provide any depth.

I am engaged in other stuff, which made me skip some lectures. I would have wanted to attend them but I prioritised it this way for now. The lecture slides was very good for getting information after the lectures and surrounding the assignments.

Lecture format is outdated

As said above, i found the content of the course inequal. Tat may be because I already knew some topics and those that i didn't know seemed more interesting then.

Some lecures were not informative enough. But I understand that due to limited time that may not be possible.

As stated earlier:
Lectures before logic/planning: Very Good
Lectures from thereon: Ok

I think much of the new concepts needed slower pace and more time than what I can digest in the lecture time, that's why I prefer watching videos and participating at online courses. I always love to dig deep to understand the topic thoroughly.

Too much information. Needs to be more general.

The logic introduction lecture (7) was really basic and hence not interessting IMHO.

The lecture about linguistics was a bit interesting but it was maybe a bit much about a noncentral topic.

The guest lecture about robotics seemed to be more like a personal presentation aimed for someone who's interested in the work of the presenter specifically.

Deep Nets lecture by Stefan Carlsson was very interesting. Combient guest lecture was also very interesting.

Depending on subject and teacher. Some subjects were easier to grasp, others not so much. Unfortunately, I don't have any more input here.

I'm not much for lectures.

Good stuff.

Patric's lectures were very connected to the course, easy to follow and very interesting. Later in the course lectures by Jana started getting a bit too theoretical and for me a bit too hard to follow.

Jana and Patric are exceptional lecturers!

Found Patric's lectures particularly interesting, but did not attend a lecture by every lecturer.

Both Patric and Jana are excellent orators, and engage the audience in a really nice way. The large number of live demos was gutsy, but also very appreciated. :)

Some planning lectures were a bit tedious.

Whenever logic or math is presented, please consider doing them on the blackboard. Following logic and maths in powerpoint is a pain.

Well structured and well taught

The guy who did NLP was terrible but otherwise fine

Compared to the lectures in programming courses I've had during my education here at KTH, this lectures were really interesting and I didn't fell asleep one single time!
I also find that I for ones understood (programming has always been my week side) what the lecturers (Jana, Patric and Danica) were taking about and was able to relate it to real world problems and the labs.

Patrick Jensfelt can explain very well :)

Nice job! Good lecturers and good slides.

This wasn't due to the material, but the teacher spoke rather slowly and didn't manage to get all her points through.

Would like to have some stuff on the board as well, so we just don't stare at a Power Point presentation for two hours.

Mostly reading off the slide and not very much explanation. Some examples, which was good

I liked all the lectures ,they were really exciting.

Could be more instructive.

I'm a distance student, would love to participate in lectures but I'm not able to. I am forever thankful for annotated lecture notes that don't assume participation.

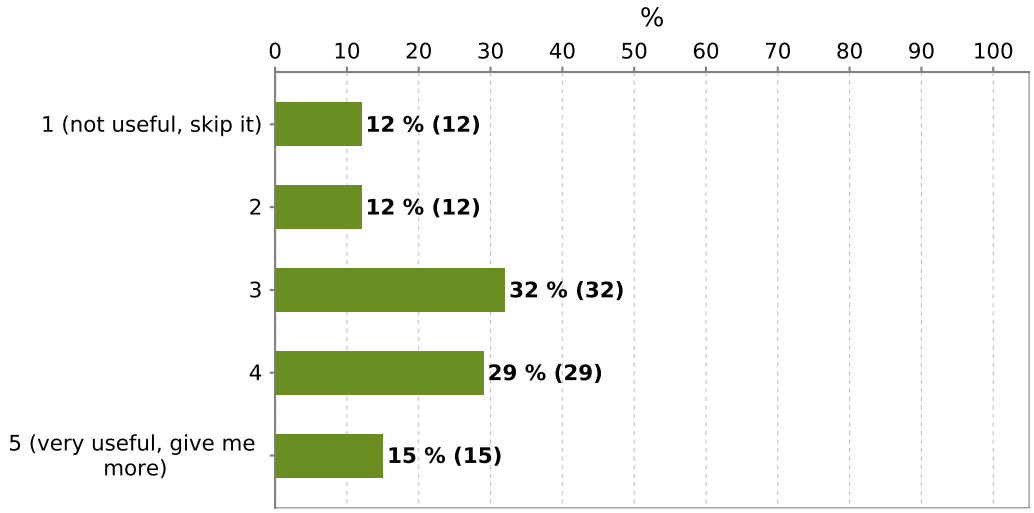
No comments

Not dense enough. We lose too much time. The pace is too slow. No added value, wikipedia page is better and I can read it faster. Attending the lectures is a waste of time.

Some lecture has too many contents to understand hard.

Lectures should be more detail

How useful was the guest lecture on Deep Nets by Stefan Carlsson? (only answer if you attended it)



Number	Distribution	Answer choice
17	12,1%	1 (not useful, skip it)
17	12,1%	2
45	32,1%	3
40	28,6%	4

21	15%	5 (very useful, give me more)

Average (for numeric answers): 3,22

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140 have answered of 423 (33%)
Maximum number of choices: 1

Respondents comments:

Did not attend unfortunately.

It was intersting but i dont thi

Did not attend.

Useful for introduction but most student have already had an introduction and thus maybe the lecture needs more specific knowledge on the topic.

Very interesting.

can't remember if I attended

I wasn't there

Well it's

maybe not useful, but interesting.

It was just ok. Intriguing, yet nothing special.

It was interesting to hear about the history of Deep Nets and how fast if evolved. Very fascinating and inspiring lecture.

It was very nice to get a brief introduction into the exciting field of Deep Nets.

It wasn't deep enough for anyone who's head about deep learning before (like me), and I also believe that if you've never heard about it one lecture is not enough to understand what it's all about.

The topic in itself is very interesting ! But it is way too wide to be covered or even properly introduced in 2 hours (which were not even 2 hours...)
As a result, we didn't learn much, but that is not the fault of the teacher but of the time dedicated to it. It can simply raise interest for people who haven't heard of it and make them want to attend a real course on deep learning.

Really fun lecture

I marked not usefull because compared to Roelof Pieters' lecture was just messy.

I had already taked the Image based classification course, so it was nothing new for me.

If useful regards knowledge gained to complete the course; the lecture was not useful.

Didn't attend

Ok overview.

It was interesting, but maybe not so usefi

I accidentally pressed this button and cannot unpress it.

It was inspirational, I'll totally take the deep learning course in next spring!

It was not really connected to any assignments in the course and therefore not really useful. However it was extremely interesting and that is what guest lectures should be. I would gladly attend similar lectures on my free time.

I can't way that it was useful in any way since it was very far away from the things actually

It was interesting but not so theoretical and a bit all-over the place. I would like to have seen more structure. The lecturer however did come across with his message.

I think it was good, however after that lecture we had another lecture about deep nets in this course. I think it was the one about NLP. Thats redundant! Additionally, the machine learning students have another lecture about deep nets in Machine Learning I

Unfortunately, I did not attend this lecture.

Not so useful yet, but interesting.

Very interesting, but maybe not so useful.

Useful only if you never never heard about Depp Nets. But considering that they're on the mouth of everyone in this days I would have liked a more in-depth lecture

It was interesting and relevant to the field, but it was (obviously) hard to fully comprehend in one lecture.

Guest lectures rock! Can't answer the question though, because I've got pretty good understanding of NN already.

Not very useful, but very interesting.

Very interesting but not useful for this course

It was at least very interesting

It was indeed a very good experience attending this lecture with such a deep level of understanding on this domain of AI.

It was a really interesting lecture.

I'm very interested in deep nets, it's well worth one lecture.

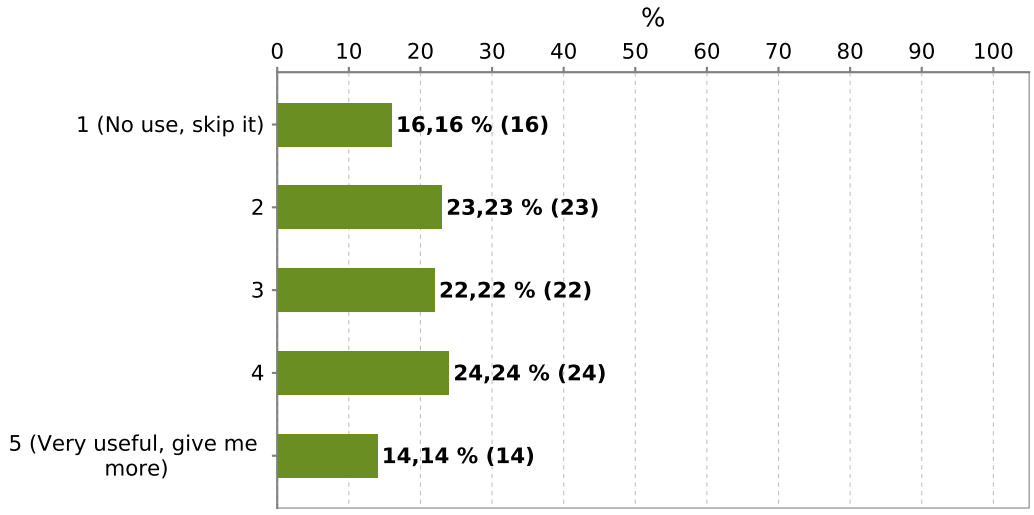
Wonderful that he included a bit of history to give some context to the developments! I would have liked to know more about what one can do to experiment with the technique at home. I understand this is probably part of the machine learning course, but as much as a link with "this is the hardware you need and this is the software you need" would have been cool! (Of course, it's but a google search away, but still!)

Very good and inspiring!

It was good but I do not see why it is part of the course.

After that lecture, I want to take the deep learning class at once.

How useful was the guest lecture on NLP by Roelof Pieters? (only answer if you attended it)



Number	Distribution	Answer choice
21	15,9%	1 (No use, skip it)
31	23,5%	2
29	22%	3
32	24,2%	4
19	14,4%	5 (Very useful, give me more)

Average (for numeric answers): 2,98

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132 have answered of 423 (31%)
Maximum number of choices: 1

Respondents comments:

Did not attend unfortunately.

Did not attend.

Not useful but don't skip it. Just change it.

Very interesting.

this wasn't so related to the rest of the course so this I think could be replaced by a lecture for one of the course topics.

If you have taken the course in language technology, it was revision.

Interesting, but maybe not that well-organized due to the time limit?

Too many details for a short guest lecture

It was nice that Roelof mentioned both the traditional approach and the deep learning approach to NLP, very fascinating (Though the part about traditional linguistic analysis was a bit try... Probably due to the subject itself...).

I wrote my bachelors on NLP so was already familiar, but it was alright.

I skipped this one halfway through, since the pdf looked so huge and detailed that I felt like I have to go through it anyway for the quizzes.

I wrote my "Kandidatexamensarbete" on NLP's, so for the the lecture was very interesting.

Very interesting, but maybe not so useful.

I really enjoyed that lecture! It was the best introduction to Deep Nets and NLP so far!

I had already had this lecture before in Image based classification, so it was nothing new for me.

If useful regards knowledge gained to complete the course; the lecture was not useful.

Didn't attend

Mind blowing partly.

Went through the material a bit to fast.

I attended half of it but it didn't really feel relevant(even though I know it was!), so maybe just change the layout or something

Was a bit rushed. Good at times, but overall a bit too much was attempted to be covered in too short time.

Lots of fun, although more of a gimmick talk than actual lecture.

Do not bite off more than you can eat. Too much new content for 105 min. I think there were actually more than 130 slides.
The last part was more interesting though, when showing different real applications.
I understand he wanted to give us an insight of the the theoretical details, but it simply does not fit in one lecture.

Way to broad and why was deep learning for image recognition a topic?

Unfortunately, I did not attend this lecture.

Too fast on fundamental concepts. Needs a better outline. Interesting topic though.

It was honestly too much material presented in a way that was not very engaging in my opinion.

The stuff about deep learning was fascinating, and good to get a background on NLP, but way too fast presentation to be able to follow properly. Consider splitting into two different lectures, perhaps doing the deep learning part jointly with the lecture on deep nets.

Too many topics squeezed into a single lecture. It would be useful to allocate more time to NLP or simplify the lecture.

What did I learn? Grammar???

I didn't understood much of the lecture and found it quite dull. However, looking through the slides, in preparing for the quiz, over and over again made me understand it and thought that it was a really interesting topic in AI.

extremely cool! Especially about how to combine vectors of knowledge :)

NLP is really interesting. Review it and focus it on different technologies and attempts to parse it instead.

Very boring and stale

I found this lecture to be a little dragging Dont know why,

I thought it was too fast. But maybe that could be because I didn't prepare anything for it before the lecture.

The diversity is the strongest aspect of the course I think, giving a broad overview like this is important.

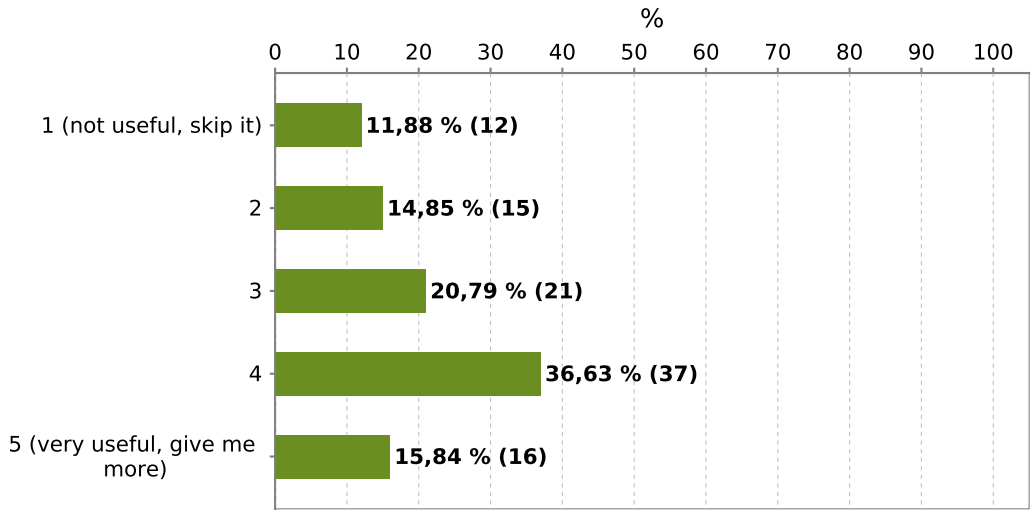
Very good and inspiring!

It was good but I do not see why it is a part of the course.

The content was too much and not well organized.

The framework is not very clear and hard to follow. But the tips about deep learning is useful.

How useful was the guest lecture on robotics by Danica Kragic? (only answer if you attended it)



Number	Distribution	Answer choice
14	12,1%	1 (not useful, skip it)
17	14,7%	2
24	20,7%	3
43	37,1%	4
18	15,5%	5 (very useful, give me more)

Average (for numeric answers): 3,29

116 have answered of 423 (27%)
Maximum number of choices: 1

Respondents comments:

Did not attend unfortunately.

Did not attend.

Very interesting.

this was more useful then the other lectures because it is more related to what we discussed in the class and shows what research opportunities there are for us as students (if we enjoyed what we learned in the course and want to do research in this field).

It was inspirational

Did not attend

It's OK, but too brief.

Many examples of robotics were given and the lecture was interesting.

Same here, skipped halfway through since I didnt feel like it was useful at all.

If useful regards knowledge gained to complete the course; the lecture was not useful.

Didn't attend

Too short!

Not useful for the course, but overall very interesting if you're interested in pursuing something in AI.

Difficult to follow, perhaps caused by video running in background without much explanation or context.

Same as above!

Unfortunately, I did not attend this lecture.

Not useful but interesting.

Very interesting, but maybe not so useful.

Quite interesting to see the state of the art in research

But Danica is my role model in life so... No, but it was really fun to see what the current research is!

Queen D!
I think it is so cool and important research topic that Danica is working with and ever since I read an article, some years ago, about her and her research I was really looking forward to this lecture when I signed up for the course and I was not disappointed!

I don't know about useful, but it was very interesting.

The lecture was good with the videos shown which was really encouraging

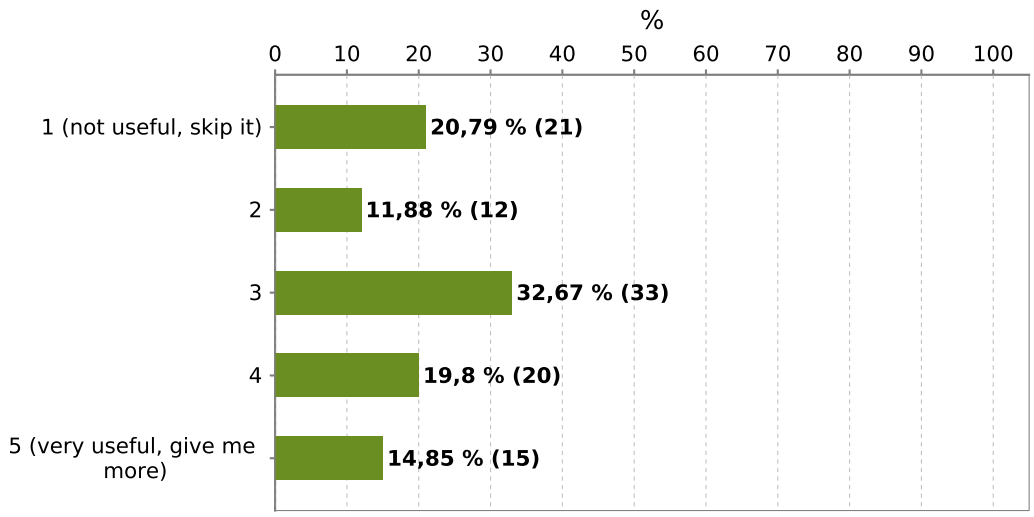
The diversity is the strongest aspect of the course I think, giving a broad overview like this is important.

Very good and inspiring!

I did not get the point of this lecture. Again, I do not see why it is a part of the Artificial Intelligence course.

The content is interesting. And see something advanced can stimulate my morale.

How useful was the guest lecture from Combient about AI in industry? (only answer if you attended it)



Number	Distribution	Answer choice
20	21,1%	1 (not useful, skip it)
11	11,6%	2
31	32,6%	3

19	20%	4
14	14,7%	5 (very useful, give me more)

Average (for numeric answers): 2,96

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95 have answered of 423 (22%)
Maximum number of choices: 1

Respondents comments:

Did not attend unfortunately.

Did not attend.

Very interesting.

Can't remember exactly why, but I do remember I felt 50/50 about this one.

Not bad.

This one was interesting, keep it.

great to hear about industry

Felt more like "come work with us" than "This is what you can use your knowledge for"

If useful regards knowledge gained to complete the course; the lecture was not useful.

Didn't attend

Neither useful nor interesting, unfortunately. Just my personal view.

Nice to see what is done in industry.

I didn't hear about this one!

Extremely skilled speaker, I truly enjoyed the lecture. Definitely, something to keep from the future. Maybe not everybody wants to found the new one-billion-worth company.

Even though it was a bit superficial, I think its good to have someone from the industry since thats not a field where the general student knows a lot about.

Unfortunately, I did not attend this lecture.

Interesting to hear about applications though I think companies should pay to the institution if they want to market themselves for students (which I partly got the feeling that they were doing). In case they paid you to do this, it's okay. Otherwise, you should consider charging future companies for similar lectures.

Very interesting, but maybe not so useful.

Quite interesting to see the state of the art in research, but he seemed there to recruit people for his cause :D

Thus I am not into the "Datalogi-Master" I found it not that relevant to me. So maybe my answer here should be ignored.

Cool company.

I missed this.

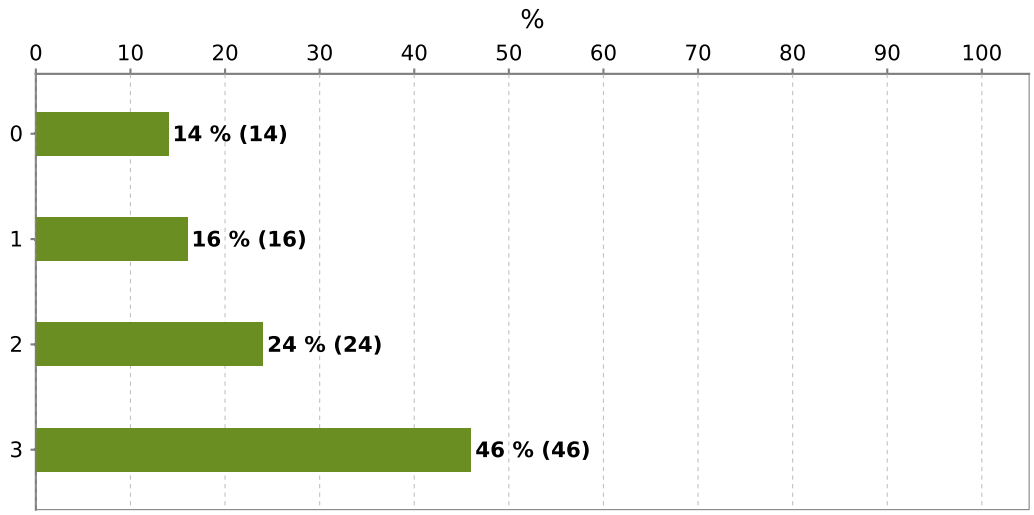
To much recruitment talk. Not everyone is even interested in working in B2B, and even less for them. So skip the "selling" talk, which they included way too much of. Also, they simplified so much in the talk when it came to the financial parts of the

companies. "If you do this, you can make the products cheaper and then you can sell more and the revenue will increase for the company and that will make it more profitable" but did not take into account the fact that a lower price point could result in lower total revenue despite more units sold.... Just did not feel serious at all.

It was quite bad, again no relation with the course. And I was not convinced that what I have learnt during the whole course was relevant regarding what is done in the industry.

Very useful. I know which kind of ability I should own for the future work.

How many Tutorials did you attend? There were 3: Games, HMM1, HMM2.



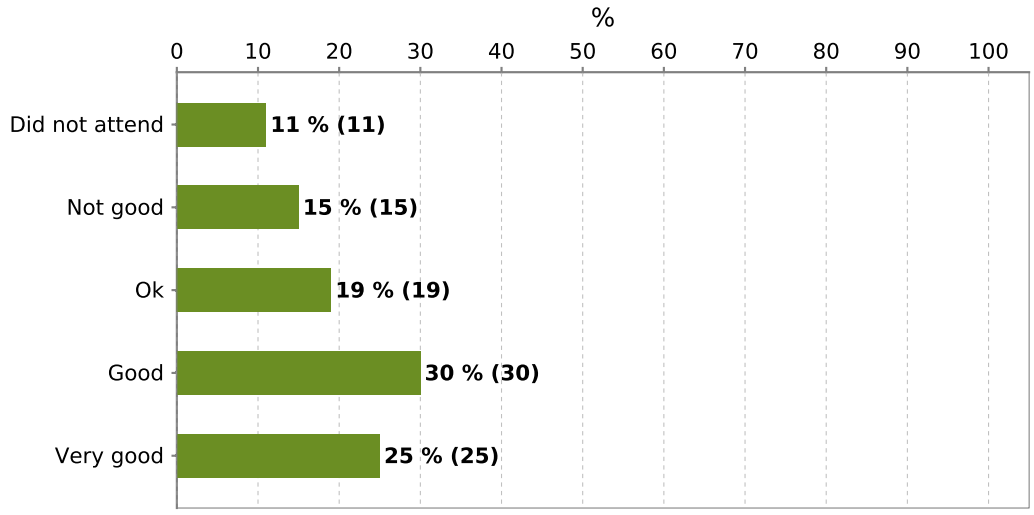
Number	Distribution	Answer choice
25	13,7%	0
29	15,8%	1
44	24%	2
85	46,4%	3

Average (for numeric answers): 2,03

183 have answered of 423 (43%)
Maximum number of choices: 1

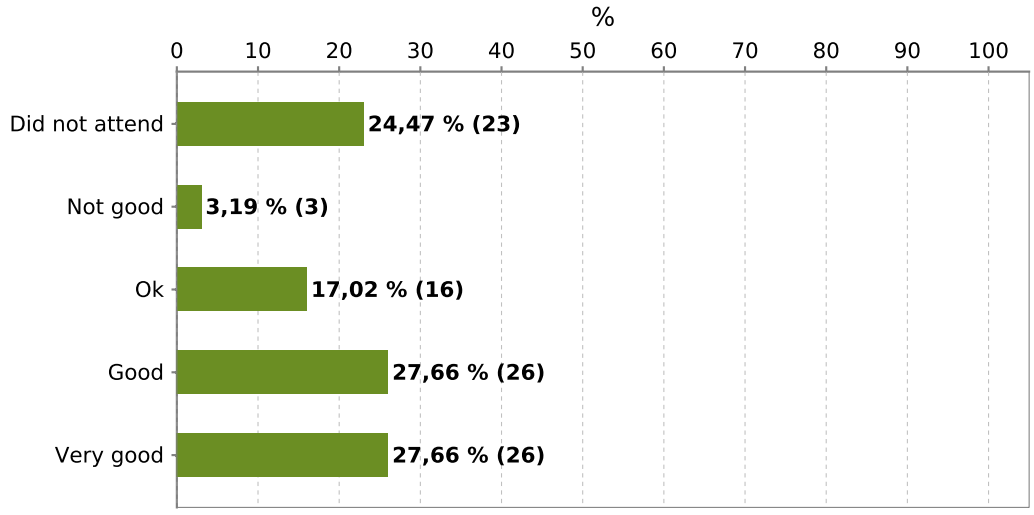
How would you rate each tutorial session? Please provide a rating for each row below.

Tutorial 1: HMM 1



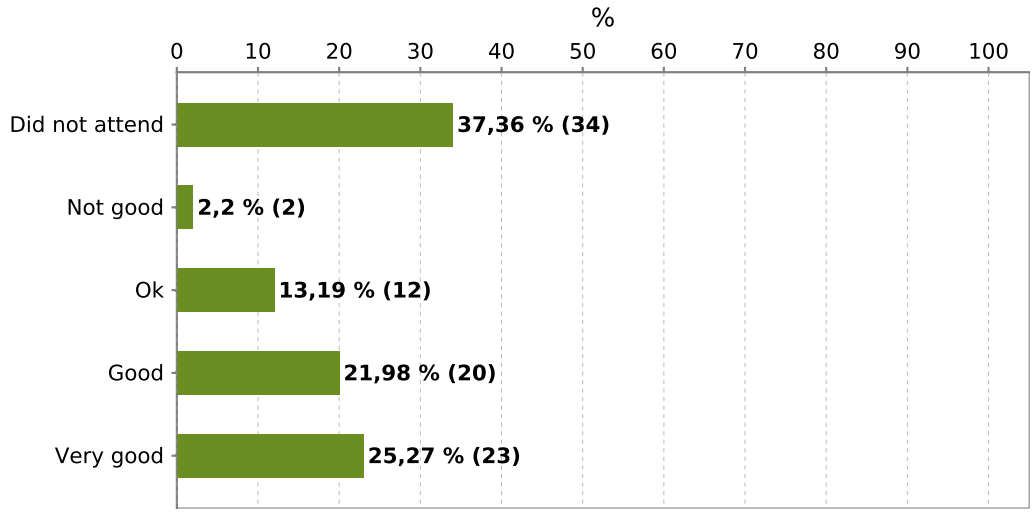
Answer choice	Did not attend	Not good	Ok	Good	Very good
Distribution	11,4%	15,3%	18,8%	29,5%	25%
Number	20	27	33	52	44

Tutorial 2: HMM 2



Answer choice	Did not attend	Not good	Ok	Good	Very good
Distribution	23,3%	3,4%	15,9%	26,1%	26,1%
Number	41	6	28	46	46

Tutorial 3: Search and Games



Answer choice	Did not attend	Not good	Ok	Good	Very good
Distribution	34,1%	2,3%	11,9%	20,5%	23,3%
Number	60	4	21	36	41

176 have answered of 423 (41%)
Maximum number of choices: 1

Respondents comments:

to little concrete examples, instead it was too much theory to explain something much easier to explain in a simple way with examples.

The first tutorial was very confusing and not so well structured.

Tutorial 1 did not cover all the things it was supposed to be and the pace was quite slow, but they made it up in tutorial 2

Very good.

each sessions helped better understand the concepts from the lectures

The assistants were very bad at teaching in my honest opinion. One of the girls just writes of her paper on to the whiteboard as if it would be any better than me just reading by myself. The other one also was very lacking in teaching. It just feels like the assistants have no sense of what we students struggle with as they simple are too used to the course content to understand our perspective. For example, what I want for HMM is not some general explanation with letters and sum signs, I want a simple example with numbers that are given to me. Giving me a paper and asking me to just do calculations given heavy theory is not a tutorial, it's like a test. The tutorial sessions ended up being worthless and the time was much better spent on google.

Really good, helped a lot understanding these courses. It's always useful to take some exercise while learning some theories.

Our TA only did half of HMM1, had to attend it twice

The level was a little bit too basic. It feels like the tutorials are only made for students that struggle to get an E.

I would appreciate more explanation about the learning problem of HMM, the assistants just skimmed through it.

The TA's did a good job, the material was very good and I felt like a learnt a lot from each one of them.

It had to do with the person holding the tutorial.

Come on, these were not tutorials. I would just call them Self-Study with some assistants present.

Good if you are struggling with the theory, I wasn't.

Same as before, lots of work. I intended to go to them but lots of other things came in the way so i skipped them.

I felt that the tutor felt that everything was obvious. The pedagogy aspect was terrible.

It helps a little bit to understand how the algorithm works to make it on paper. In that sense, it is not bad. However, this time could be used to see different examples, go a little bit beyond the course but that's maybe not what a tutorial is for.

I did not attend the rest because of lack of time, but they felt really good and helpful.

The ones I attended were quite crowded

The TAs did a really good job and they filled lots of gaps that i had from the lectures

Wanted to go to first tutorial but it was full so I didn't get a spot. Afterwards friends told me it wasn't too good so I didn't attend the other tutorials either.

Liked the first one, unfortunately didn't have time to go to the others.

It was perhaps good that they were very hands-on.

One of the teachers on the first tutorial was awful, but I don't remember any names unfortunately. HMM2 was a bit hard to grasp, but a great teacher. Search and games super interesting!

They proved very useful when doing the laborations!

I skipped one session and I would not recommend anyone doing the same.

I really liked that the tutorial session also contained tasks instead of just being another lecture.

The TA basically just wrote a bunch of formulas on the whiteboard without explaining them. I can get those formulas from google, but during a tutorial session I want them to be explained in a simple manner so that I can understand them.

HMM1 was difficult to grasp in such a short time, and there were lots of students in tiny classrooms.

I went to the first one twice. The first session was terrible, because the classroom was too full so it was really hard to concentrate. On the other hand, the second session was great. So more room is needed.

Tutorials were useful to understand some parts of the theory, but not to get a clear idea on how to solve the assignments. Maybe that was the idea though.

HMM; I felt that I didnt get enough understanding for the assignment.
Search and Games: Good if aiming for E-D on the assignment.

They really helped for the labs

If the third was just as good as the first two I regret skipping it!

No use at all! Terrible, extremly slow, we were to work by ourselves for like 20 min before the TA went through the excercise, 2 min is enough!

Teacher stared at whiteboard and wrote all the formulas, not explaining or really informing us about what she was doing.

Like in all courses, the tutorials are better in almost every way than the lectures.

I missed out on tutorial 2 because I was sick, which made homework 1 much harder than it should have been.
It would be great if you could see the solutions to alfa-pass, B-pass and gamma-function from home instead of "see the solutions on the board" .

HMM1 +2

Some of the TAs were good at explaining things and teaching, others were very bad at explaining things

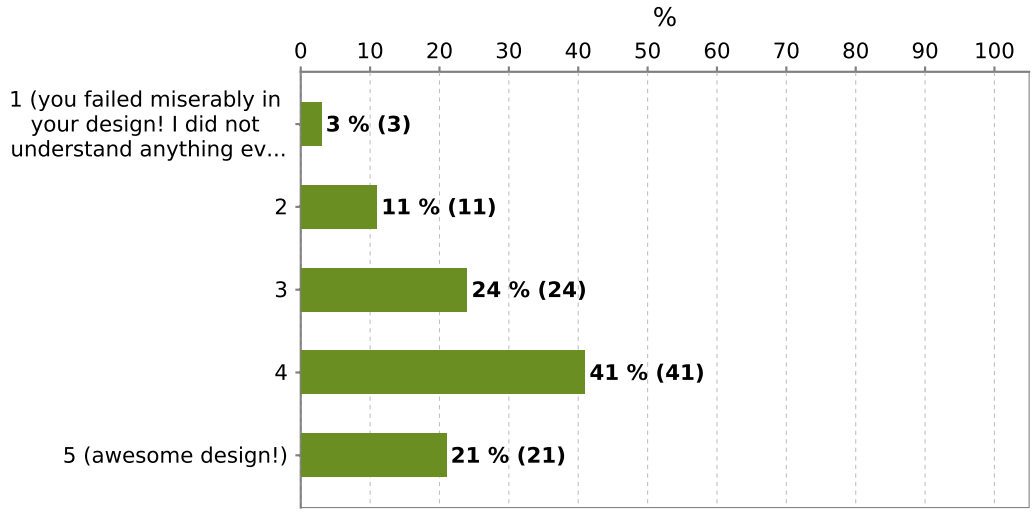
Kaiyu Hang did a really good job in tutorial 3, he really motivated us for the search and games problems

My HMM1 tutorial was taught by Judith and she forgot to cover 50 % of the material. She said that herself in subsequent HMM1 tutorials, but it was not communicated to those who already attended and consequently missed 50 % of the material. However, Judith has been very good in the course as a whole. But now the question is about HMM1 tutorial.

The tutorials are good.

They are all useful.

How would you rate the design of HW1 and HW2? It was meant to be such that you would get enough help to get started and reach grade D guided by the assignment text and that you would need to come up with more and more things on your own as you went on.



Number	Distribution	Answer choice
5	2,7%	1 (you failed miserably in your design! I did not understand anything even at the start of the assignment)
20	10,6%	2
45	23,9%	3
78	41,5%	4
40	21,3%	5 (awesome design!)

Average (for numeric answers): 3,68

188 have answered of 423 (44%)
Maximum number of choices: 1

Respondents comments:

Being a DD-course there should of course be some implementation. But I felt that is had a bit of wrong focus when we needed to implement all the matrix algebra code. This led to the feeling of not doing that much AI related work. On the other hand I became better at coding matrix multiplication, yay:-)
But I think that it would have been better to let the students focus more on actual AI implementations.

HW2 was alright good up to the part for C (didn't do the rest), HW1 was also okay (although it was more work) up to the part for C, but the A-B part seemed a bit annoying to me (I know it's not supposed to be easy). I couldn't test the code on my computer and couldn't get it running on the Ubuntu PCs from KTH either so I had only the kattis evaluation (if kattis would have printed negative scores that would have been more helpful too, getting always 0, no matter what you change, is rather annoying). At some point I got a positive score of 3 but even after a lot more changes in the code I couldn't get beyond 8 so I gave up. The whole process felt a lot like brute-forcing to find the correct parameters (what I also heard from others).

Max grade of C if no

Nice design and a lot of fun!

really really enjoyed the hw and the breakdown of the difficulty for each grade.

It was very difficult to get the required points in HW2 as kattis doesn't provide feedback, so we tried a lot of things and finally we get the needed score just with the basic code (minmax + alphabeta pruning), changing little things.
Also for HW1, it would have been nice to have more feedback in kattis about the A excercise.

Well since I got A and B for HW1 and HW2, I do think they're exactly great, but the difficulty for different grade of HW2 could be better designed I think.

According to your goal (easily reaching an D) the design was perfect. However, the workload for getting an A was too high.

There was a too high of a threshold going from C to B/A in HW1.

The instruction (at least up to D) was very clear and it was very easy to reach D level.

It did a good job at that. There could perhaps have been a little more emphasis on different ways to define your HMM's as there were many different ways to do that and it impacted the results heavily, whilst in the tutorials I got the impression that there was basically only one correct way.

5 if not because of kattis.

For HMM3 it was very hard to implement (plus it was proven to be useless in the end). HMM4 was just the Stamp tutorial and straightforward. I would just remove HMM3 completely, since it is only needed for Daisy, and not the actual presentation.

For the assignments: I know Spotify gave you shit about the "creativity" and "problem solving" skills of the students, or rather the lack of such skills. However I had more problem with misinterpreting the assignments then understanding the theory, You don't have to hold our hand and say "use this algorithm here", but it would be nice to at least understand what is tested or how it is tested. Some clarification could be done to the "duck hunt", as you said in the projects "pictures are helpful"

What is the point to only give lectures up to grade D?!

The homeworks were interesting and helped understand the course material. The progression was OK in term of dfficulty. However, I hated the test system on Kattis for HW1 because my program worked on java but not on all the test cases of Kattis (because of some specific difference in one test case maybe). Since you don't get an error message explaining where the problem comes from, you spend a lot of time trying to fix it for a very stupid problem most of the time.
As a result, i spent maybe 80% of the time i worked on the lab not understanding how a HMM works, but fixing a java syntax problem. This was terribly frustrating, and I think I'm not the only one who had problems with that.
A simple way to fix that for HW1 would be to provide the strings for all the tests, so we could test them separetely.

HW2 needs more information regarding different heuristics to use.

The design was very informative and straightforward on what you have to do

The jump to Duckhunt was a bit weird, it felt a bit disconnected from the ea

HW1 and HW2 were very interesting and fun!
In some way reduce the time needed to be spent on the assignments. More than half of the time on Duck Hunt was spent tweaking parameters. While an important lesson to learn regarding real life applications of machine learning, possibly not the

most efficient way to spend time on the course. Likewise for checkers, even though the total amount of time was less than for Duck Hunt.

Need more clarity on how th scoring works in Tic Tac Toe.

Great text to read although more cross-linking between the lab text and the different reading material of the course and other sources would be great. However,

Duck hunt was not designed in a good way. It was easy to understand what the problem was, but unclear in what exact way to approach it. And it was very easy to overdo. You should provide a spec saying you need at least those techniques to reach score X.

As already said above, the gap between C and A/B is too big. For C everything was fairly easy, but for A/B you needed to guess what you wanted to be implemented, that was really time consuming and I learned nothing from that.

HW1: the step from D to C was much less than the challenge of finishing HMM1-4. I would have liked to do HW1 in Python.

HW2: the requirement for C felt incredibly shallow. It was very hard to make a qualitative judgment on what was necessary to get the required kattis score. Even by discussing with others it seemed that the changes others needed to raise score from 96 to 97 varied wildly. This was more luck than skill.

HW1 was difficult in a challenging way. A bit slow to grasp where to start, but maybe that's just my fault.

It was good. Started off pretty basic and then became increasingly difficult!

Kattis score was dependent on

The coding framework was awful. Terribly documented, restrictingly implemented, and painful to debug

It would be good if you told us this on beforehand, so we had some idea about which parts we should expect to be time-consuming. We had no clue that there would be such discrepancy in difficulty between HW1 and 2 and gave up on duck hunt because we are thought there'd be no way we would be able to finish both in time.

HMM (HW1), had very mathy questions which re-phrased were much easier to answer. Some of the mathematical jargon was unapproachable at first, but you learned it after a while. Also stamp.pdf <3

Really great labs with instructions to get you started.

Explaining text was easy to understand and helped greatly for understanding when read rigorously. This is not often the case so in the beginning we did not read the instructions that thorougly. When you later picked up the lab and read through it, you completely understood what you had done and what for. Great!

A big flaw with HM2 was the 97 point mark for the 3DTTT. Heuristic had to be very specific to get the score and more depth did not give better score but should perform better. Also Checkers turned out to be much simpler than 3DTTT because of that.

I found the description for the C level of HW1 to be a little bit too ambiguous, this might very well have been intentional, but it did create some anxiety before the presentation. (Which in the end was unfounded, cause we knocked it out of the park).

I liked the design, HOWEVER, I had trouble with having NO real local testing possibilities. Often I ended up with a solution that looked good locally, but failed in kattis. Then it often took very long to figure out where to problem is. Most of the time it where just stupid mistakes, but I did not feel like I learned a lot from making these, they just took a lot of time. I think it would be good to have some local testing possibility, since kattis is a black magic box and not really supposed to be debugged on. So, I would suggest to have more intermediate results till the C level. For example with the HMMs, I don't see a reason why different inputs and output pairs cannot be provided for the assignment 1-4. With these it would be possible to debug more locally. Especially with the 4th assignment where it takes a lot of time to come up with own test cases to converge. But especially with TicTacToe3D, there was no reasonable way if the output is correct. 3-5 examples with input and output would have helped immensely!!!

When the Kattis score wasn't high enough it was difficult to know if parameters needed to be tweaked, bugs needed to be fixed or if fundamental changes needed to be performed. This was very time consuming.

As mentioned before, I felt that they were really good, but maybe the different between C and A was a bit steep.

The theoretical part of the assignment was totally clear. The skeleton provided needed more documentation because I spent one afternoon understanding the Chess implementation (Java)

Some errors in the manual, otherwise good.

Written by people high on the autism scale.

HW2 is great, but Hw1 is a bit harder to understand with all the mathematical notations.

Too much effort was put into the E-C part, instead of the B-A part.

Kattis evaluation is not ideal for these assignments, especially for HW2 - in the end, we discovered that all the extra implementations (such as Zobrist hashing) are useless for a higher score in Kattis and it was enough to create a simple Alpha Beta pruning system + tweak the evaluation in order to get a score high enough for A. Sure I did learn a lot about different implementations in Games but it is unfortunate that it did not so any good for this assignment but only causing frustration.

There was a lot of confusion (both for me and what I can see of some other students) on the harder parts of the hw. Duckhunt's solution, we basically found by fiddling around with numbers. The same seems to be true for tic tac toe, messing with heuristics. At that point it is not a matter of understanding the material but how persistent you are in messing around. And even if you understood the theory, if you didn't get a high enough score you couldn't even be asked questions or have your knowledge properly evaluated.

Except for the grading C level on the board I think everything was fine. Duck hunting was challenging.

HW1 was perfect. HW2 was less... self-contained. Symbols and equations were not explained a lot. Maybe that was intentional – I don't know.

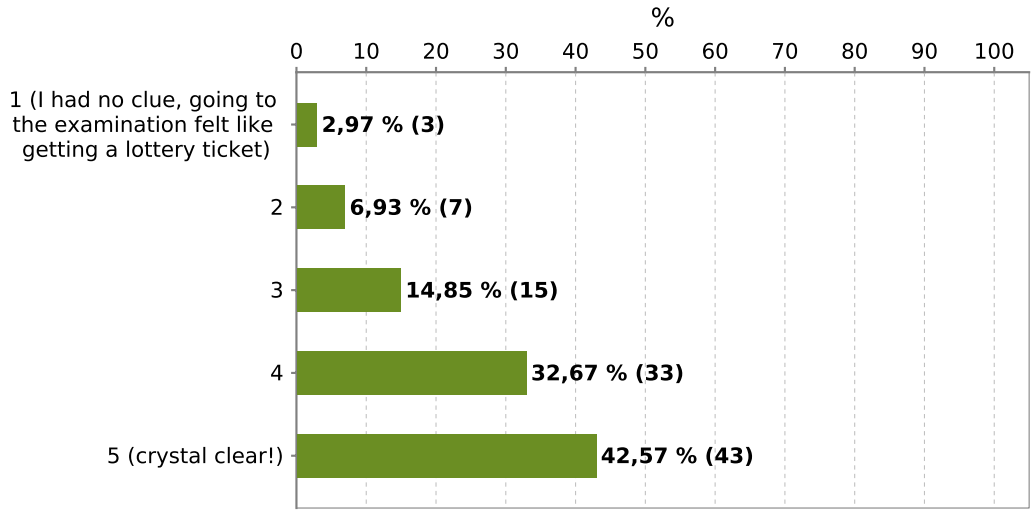
The C part of the HMM homework could not be worse.

Although during HW1 it was not clear that I need something beyond the lecture material, it's really a great idea!

We need spent a lot of time on the framework.

I preferred HW2 over HW1. I had a really hard time learning how to explain HMM to the assistant.

Do you think that it was clear what was expected of you for the different grades on HW1 and HW2, both in terms of implementation and understanding?



Number	Distribution	Answer choice
5	2,6%	1 (I had no clue, going to the examination felt like getting a lottery ticket)
13	6,8%	2
28	14,7%	3
63	33,2%	4
81	42,6%	5 (crystal clear!)

Average (for numeric answers): 4,06

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190 have answered of 423 (44%)
Maximum number of choices: 1

Respondents comments:

Everything was very clear.

yes the assignment descriptions were very clear.

-

I do not know what level of knowledge of everything I needed for the presentation. That seemed to differ heavily between TAs.
Anecdotal example based on my experience and discussion with reliable close friend:
My friends team out performed my team in Kattis.
We got like 3 questions from the "questions"-paper which we managed to answer quite poorly
My friend got every question (like 5) which they answered quite well according to him, which is likely since he seems to know a lot.
I ended up with a higher grade than my friend.

HW1 for C was very weird and unclear to me. Iirc, you were supposed to change the number of states and see how it affected the outcome of some algorithm implemented but it felt like changing the number of states changed the definition of the problem or something. I was just very confused about the purpose of it.

The instructions were clear.

It was clear. The grading scale is not linear at all, because the duck hunt for example was way harder than the first part. The early deadline for the best grade (duckhunt) made some people interested in the problem give up on that part because they knew they wouldn't have time to do it in due time.

Maybe more examples would make it more clear.

Same as question before.

It would have been helpful if there would have been an drop-in hour to ask stuff regarding the project.

The implementation details were crystal clear, the understanding was not.

See above comment.

With the exception of C for HW1.

I think the questions from the TAs varied greatly, maybe there could be some instruction given to the TAs on some points that needed to be handled.

Yep. That was clear.

When you have a score of 397 and the limit to pass is 400, you don't really know what you can do in order to improve.

expectations were not communicated really well, but I had no problem with it

Kattis sometimes feels quite byzantine in its grading, and even more so when it turns out that some of the details of how Kattis does the grading are incorrectly stated in the description.

Implementation was clear, understanding not so much

Figuring out which algorithms would be effective was more guesswork than science sometimes.

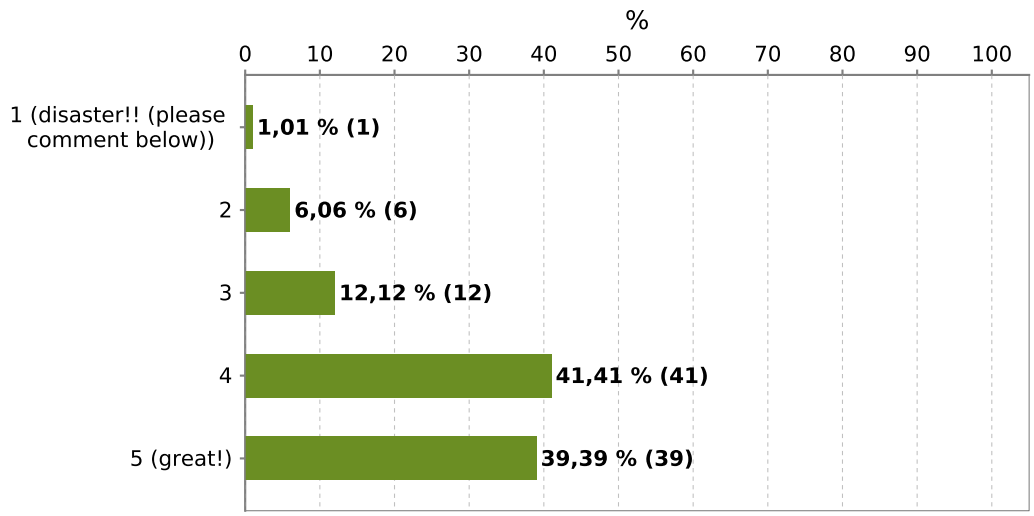
Not quite a lottery ticket, but it felt a little like if you entered the presentation saying you were aiming for a C, you'd get a C for the same performance that'd get you a D if you had said you were aiming for a D, or said nothing at all.

It was clear but HW2 could have been done differently. Instead of having checkers as a stand alone programming assignment for grade A there could have been one assignment for all grades so that the students could improve their program for a higher grade, as it is now there are three different code bases (tic-tac-toe, tic-tac-toe in 3D and checkers) but it would have been more fun seeing the same game progress through different implementations of AI.

Not clear, the grade is just about having a good Kattis score.

clear enough

How well do you think that the examination proceedure for HW1 and HW2 worked? Efficiency? Fairness? Etc



Number	Distribution	Answer choice

2	1,1%	1 (disaster!! (please comment below))
12	6,5%	2
23	12,4%	3
76	40,9%	4
73	39,2%	5 (great!)

Average (for numeric answers): 4,11

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186 have answered of 423 (43%)
Maximum number of choices: 1

Respondents comments:

I expected that for E and D we should answer the questions in the lab assignment, but we got completely different questions.

If you aim for an A, basically everything depends on the first HW. I lost some motivation for HW2 and the project after I didn't reach the A-B level in HW1. An earlier "official start" (as happened in the lecture) might have been helpful here.

More explanation of how to use the duck-hunt source code would be good.

I have been a tutor with mathematical background and he went too deep even though I aimed for C level. The sheet didn't say any thing about deep mathematical questions though.

Very good structure of the examination.

The examiners were good I think. They are a lot better at explaining stuff than the assistants at the tutorials, which perhaps says more about the tutorials than the examination.

The difficulty depends on who you get. Sometimes you get a whole crowd to present your solution for and in that way it gets a bit harder.

the alpha beta search questions were really strange, it felt like he was trying to trap us with his questions.. sigh

Strange deadline system

Both homework are too Kattis-grade-dependent. I was literally just brute-forcing and optimizing my code for Kattis and didn't care much about implementing advanced algorithms. The fact that we could reach 100 points on TTT 2D without any heuristic at all made me very not motivated to try out advanced algorithms.

Was very good and on a good level for me, however there seemed to be some unfairness based on what TA you received.

No fairness at all. Both students get the same grade.

At least for the grade I got, it was smooth.

Tough but fair.
The booking of the time slots led to some panic, you could be done with your assignment on the deadline for A-B, but that did not mean that there was any free times available.
So in truth the deadline was ahead of the deadline so you would be able to book a time slot to present your solution.

Perhaps just use the time stamp from kattis when the correct solution was submitted? reduce the panic levels a bit.

I think everyone passed with the highest grade, so doesn't seem fair.

As mentioned earlier, the TA's should really let the students know if they passed the examination for whichever grade they were aiming for. In case they did not reach it, they could immediately start preparing for the next time.

The examination itself was good but the process of signing up for presentations was bad. It was very stressful that you were

supposed to be finished with the homework to book a slot, since this meant if you finished the homework late you risked not getting a presentation slot in time.

When we presented HW2 we were asked a question somewhat related to the topic but also requiring knowledge of a specific boardgame we (my partner and I) had never played. The teaching assistent insisted on completing the line of questioning pertaining to the boardgame even though my partner and I obviously didn't quite understand the boardgame. This was, from our point of view, the only difficulties/problems we had in the presentation and was presumably the reason we did not obtain the top grade for this assignment.

In speaking with others after their presentations it seemed they had had much more *relevant* sets of questions during their interviews and were thus able to perform better.

For Duck Hunt it seemed very arbitrary how high score you got. Multiple groups with similar approaches would get vastly different scores. I think this might be due to the fact that we all used different HMM implementations. Please bring back the black box HMM for Duck Hunt to next year's course.

Finish deadline should be before any presentation slot. People finishing early, block the last slots for presentation thus decreasing the time left for the ones not as far progressed...
Also don't advise people to not work on the assignments in the first two weeks (told reason was, not all knowledge presented yet). Because it's easy to get acquainted with the exercises by slowly working on them rather then waiting for specific input...

There is actually a problem when it comes to grading and having excersises that you do, and I think that goes both for the HW and the quizzes. Even though the "oral examination" should take care of the HW grading, I think that when the deadline is tough it is better

As already said above, I experienced that, if one has "passed" Kattis, one got an A, even if the oral performance was not really convincing.
Additionally I think, the programming for an A/B was too tricky. It is of course fine, if it is difficult, but it in the end the solution for an A was simple, no advanced solution was needed, just the guessing of a (sometimes even simple) heuristic. So, I think that it was too tricky and slightly unfair because of the hard Kattis point break between C and B and because the oral examination had really any real effect on the grad.

It wasn't very clear what I was supposed to do when I arrived at the place where the examintation was supposed to be.

the problem was in the kattis requirement for HW2, which felt arbitrary.

As noted, the TA who took our second lab presentation was a stickler for exact responses, I discussed with other TAs in the course and they said they would've accepted our answers and would have been impressed.

The assistant who examined our Duck Hunt lab was so impressed by our code that he didn't believe that we had written it(which we had..). Then we had to answer every single question on their example sheet and didn't really know the answer for all of them so ended up getting a B where other friends who got other assistants got A's after only one brief question.

The difference between C-B was insanely much larger than E-D and D-C.

It looks like the teaching assistants are always surprised, disappointed or suspicious when we say that we did not split the work for the assignements. It just appears to us that as the aim is to learn by doing, it does not make sense to split the tasks (and it is also quite frustrating) : either we do everything together or we do everything on our own.

Our first labasse was great, and on HW2 he was really mean and kept us for 45 minutes.

Love that you can collaborate and try for different grades, nothing to complain about. Also, the TA's where so good that one can't complain about anything.

Obviously there's always some variance with assistants, but we felt very fairly treated. I don't know his name, but the assistant we presented HW2 for was very good at giving us time to reason about his questions, which was very much appreciated.

I get a feel that it is a bit unfair the small difference in grade between solving "birds hunting" and just some simple Markov Model Implemantation. (A/B vs. C)
The time needed for each the first one is extremely larger than for the other one.
Note: I come from a 0-10 grading system, and I do not know precisely if having a B or a C does make a big difference.

Being graded step by step with quizzes and assignments is much better than a single final exam

We had a great guy who examined us so it was fine

in hw2 we were told we had to answer "yes" or "no" and after discussing about 5 minutes about a corner case which led to our "not in general" answer, we just said yes and that's what the tutor had to

Worked okay. Always an issue with doing things in group. Also, the issue with Kattis mentioned above.

I spent more time in the examination than was set. The speed could be improved.

I got a B for HW1. We did not deserve it. Kattis passed us but our implementation was horrible and shouldn't have passed (duck hunt)

It was efficient, but like I said, I wish there was less emphasis on Kattis scores

For HW1 we didn't know that we could sign up for a C presentation: we thought that we needed a Duck hunt Kattis submission with a score higher than 400 to be able to sign up for a C-A presentation, so we signed up for a E-D presentation....

I did HW1 in pairs with a fellow student I didn't know. It ended up with me doing all the work for E-C (since he didn't have time) and he then did the last part (A) the night before the presentation. I didn't feel like presenting something I didin't know (found out it the hour before the exam) so I was clear that I only reached for a C. My lab partner didin't get a single question about the E-C part and just got to present the A-part.

It didn't feel okay, so I did the second HW alone.

Missing the deadline for A/B at HW1 also gave very little incentives to do the project or aim for higher grades at HW2.

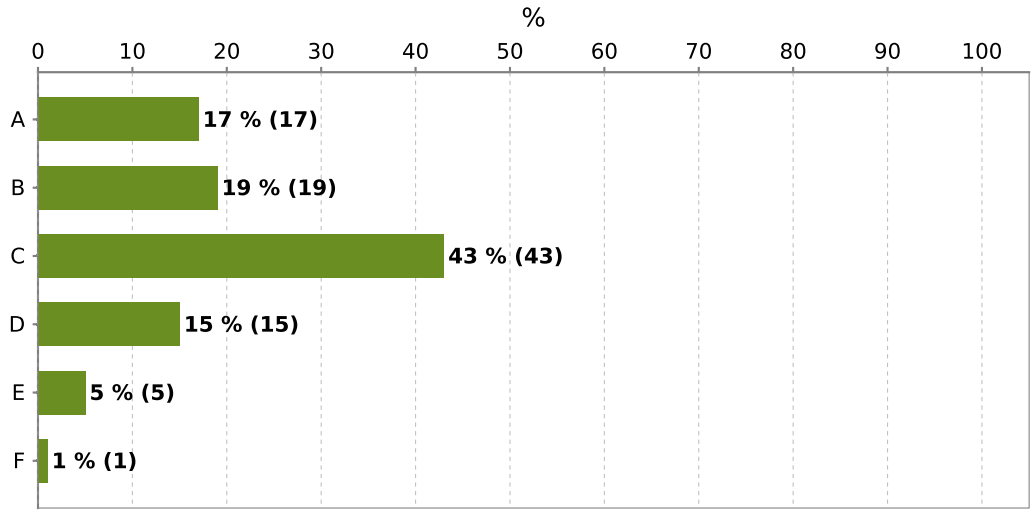
The interview with a TA is bad. Too much random. Assigning a grade according to a Kattis score is bad, I do not see what I have learnt more when I got from 398 points to 402 points. The kattis score is just about optimizing towards the score, having the good ideas and the good implementation is not enough. Too much random. A terrible waste of time to get the score required, did not learn anything.

Some TA asked super easy questions for A level, some didn't.

I liked the idea that we had the presentations and had to show our understanding of concepts.
Some TAs asked much more difficult questions than others.

efficiency.

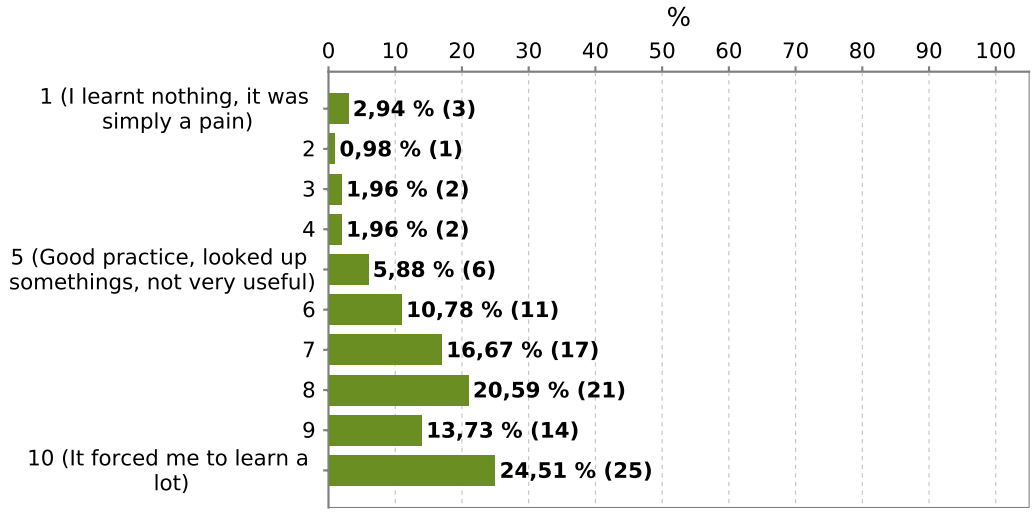
What grade did you get in HW1? (remember this is anonymous) Used to better interpret the results to see if the distribution matches that of the overall results of the course or if it is biased.



Number	Distribution	Answer choice
33	17,4%	A
37	19,5%	B
82	43,2%	C
28	14,7%	D
9	4,7%	E
1	0,5%	F

190 have answered of 423 (44%)
Maximum number of choices: 1

How useful do you think HW1 was for you to learn the course content?



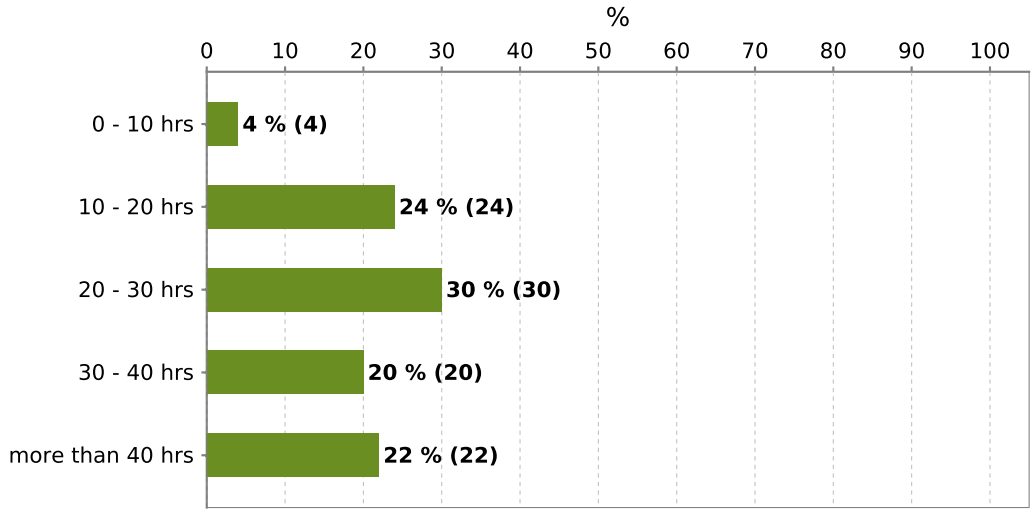
Number	Distribution	Answer choice
5	2,6%	1 (I learnt nothing, it was simply a pain)
2	1,1%	2
3	1,6%	3
3	1,6%	4
11	5,8%	5 (Good practice, looked up somethings, not very useful)
20	10,5%	6

33	17,4%	7
39	20,5%	8
27	14,2%	9
47	24,7%	10 (It forced me to learn a lot)

Average (for numeric answers): 7,69

190 have answered of 423 (44%)
Maximum number of choices: 1

How much time do you estimate you (individually) have spent on the HW1? (Excluding the final oral exam)

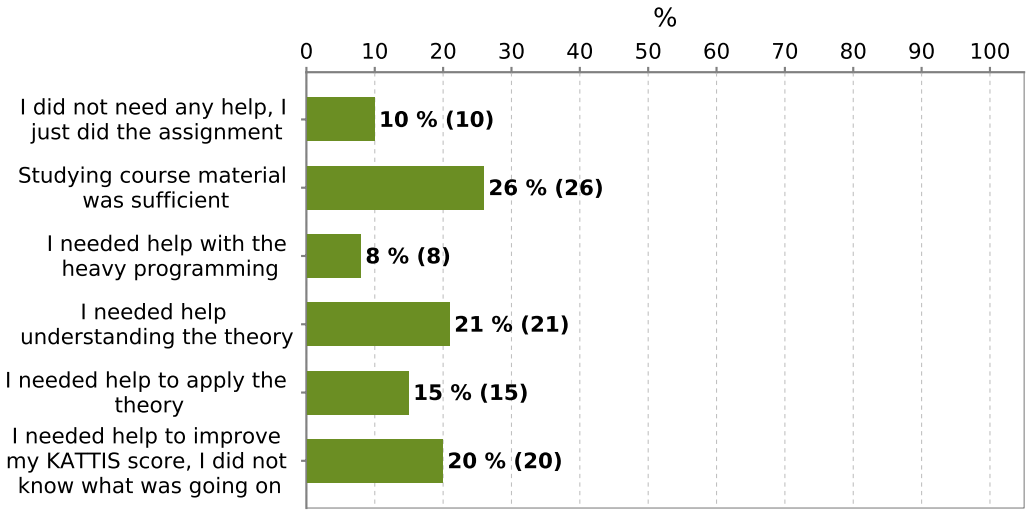


Number	Distribution	Answer choice
8	4,2%	0 - 10 hrs
46	24,2%	10 - 20 hrs
57	30%	20 - 30 hrs
38	20%	30 - 40 hrs
41	21,6%	more than 40 hrs

Average (for numeric answers): 18,39

190 have answered of 423 (44%)
Maximum number of choices: 1

What kind of help did you need with respect to HW1?



Number	Distribution	Answer choice
18	9,5%	I did not need any help, I just did the assignment
50	26,5%	Studying course material was sufficient
15	7,9%	I needed help with the heavy programming
40	21,2%	I needed help understanding the theory
28	14,8%	I needed help to apply the theory
38	20,1%	I needed help to improve my KATTIS score, I did not know what was going on

189 have answered of 423 (44%)
Maximum number of choices: 1

Additional overall comments about HW1

Text answers:

Did all the work myself and with my group partner and with help of classmates. There should really have be som sort of lab sessions where you could ask and get help.
The amount of work you had to put in was completely ridiculous for 6hp. I found it interesting, absolutely. But there was no chance for us to go for A although we wanted to with the short time limit. And we worked a lot! This course should be more hp or revised because we did not have time for our other courses during this period.

The only thing I regret is the topic on which we apply the theory. A duck hunt was not very motivating.

Had to spend a lot of time on it but a very interesting assignment.

Needed help but the TAs were very helpful in answering questions.

The time it took was crazy in regards to hp.

Just followed stamp tutorial

We aimed for the A but we did not have time to complete it, so I learn enough to do the A part but we did not get the required score.

-

Felt very short of time.

All time went to "debugging in the dark" which might be a better name for the course ;)

Way too mich programmring Just for implementing algorithms

Unfortunately KATTIS feedback is very limited, so some cases were a pain to debug.

it took soooooooo much time because I don't program well enough. Couldn't find the errors, and was extremely stressful because if you don't make the deadline it's like you didn't even start the exercise (duckhunt).

Kattis is very frustrating as said before.

It was a great intro to HMMs. Nevetheless, it required to much debuging and it was designed for good programmers. Not for the guys whom understand how HMMs works.
It would be great if you change the ratio theory to coding

Very interesting homework, but it was way to big for the amount of time given, especially since we were told during a lecture to wait until after the first tutorial. Sure, the first tutorial was very helpful when doing the assignment, but it forced us to work during the weekend and (very) late nights to be able to finish it in time (deadline for grade A)

The jump to Duckhunt was a bit weird, it felt a bit disconnected from the earlier parts.

(Duck Hunt)After solving the "main" part of HW1 and landing in the mid-high 300s. A massive amount of time was spent tweaking parameters and implementing "quick-fixes" (unintuitive extra functions) to just raise the arbitrary score. This led to Duck Hunt eventually becoming extremely tedious and tiring.

Got stuck with bugs several times. The forums were really helpful. Would be nice if there were sessions were everyone could show their code to the TAs and explain the logic and get the TAs input.

Big assignment in comparison with hw2. still, good to start with this hw and get it done first.

The framework you adopted, i.e. the gaming/kattis framework, requires an additional time for getting used to and for troubleshooting. It is an additional burden that should be put into consideration. Honestly, I do not like it much, although it might be useful from the grader/lecturer point of view

Duck hunt was not designed in a good way. It was easy to understand what the problem was, but unclear in what exact way to approach it. And it was very easy to overdo. You should provide a spec saying you need at least those techniques to reach score X. Also add more grading scaling to duck hunt... it was almost impossible to get a B... because you would need the A score but if you had a reasonably score but not enough you were stuck with a C...

I think that I was fine with programming and even more with the math but Kattis is a black box, you have no idea about what is going on there.

this was my first experience with java, which took some time. It would have been nice to do HW1 in python. The theory works there as well..

Fun, but hard to get the duck hunt to work well enough to shoot ducks. A lot of time was wasted on that.

The overall outline of HW1 was very good. It is good that you get to implement the algorithm yourself.
However, I really think that the gap from C to A/B was really very big.
And the gap was not due to the need of more theoretical understanding of HMMs.
When I talked to people that were able to get sufficient score on Kattis for A/B, they all had done practically the same thing and almost all of them had problems getting enough score.
Maybe this is due to me not having realised the correct solutions and that none of the people I spoke to had as well. But during the presentation of our work the TA did not indicate any flaws or hinted that we should have done the HW in another way.
In our and for many others it seemed to have come down to extensive parameter tuning in order to get the sufficient score. We spent a lot of time trying out many different approaches, but in the end, each approach required much parameter tuning.

This struggle with getting the correct parameters combined with having to implement the algorithm on your own resulted in a lot of uncertainty in your own work.
It was at times really stressful.

Without having found any particular reason for our implementation not performing super-well it is hard to know where the flaw in the HW is.
Either you should lower the required Kattis score, give more hints on what to do.

In conclusion, I believe that it is really good for everyone to implement the algorithms on their own, but combined with the A/B task it was a bit too time consuming.

This was possibly the worst homework framework I had ever worked with. The documentation was terribly unclear and led to hours of wasted time due to misunderstanding method or variable names. Please fix this

---

We got to a point where we were performking quite well on the environments at our disposal but not enough on Kattis, so we were compelled to submit a lot on Kattis, playing with parameters and code until we reached the required score.

Hard but kinda fun.

I had an AHa-moment, then it was quite easy!

Quite hard, but it forced me to really try to understand stuff

---

Not needing any help does not mean it was easy. I had to read a lot about probability and HMM theory as well as discuss with my lab mate a lot. In the end I believe we have learned the supposed theory.

We did make a token attempt at Duck Hunt, but getting over the initial hump of actually modeling the problem was a pretty big barrier for us. We probably would have broken through given sufficient time.

For me, felt like a lot to learn, especially on the second part.

Didn't know how to pick the right direction when tweaking my model parameters.

Good that we had to implement HMM. Don't know about the limit on Duck Hunt, in the end changing a parameter from 0.75 to 0.78 or something did the trick.

For Duck Hunt it seemed very arbitrary how high score you got. Multiple groups with similar approaches would get vastly different scores. I think this might be due to the fact that we all used different HMM implementations. Please bring back the black box HMM for Duck Hunt to next year's course.

Quite fun.

Tutorials were very helpful.

I wanted to smash my laptop a couple of times.

Fun and challenging!

The instructions in the PM wasn't enough to pass the HW. You had to go by the pseudo code in the stamp tutorial. Implementing the formulas for the steps didn't cut it.

Got seriously stuck on hmm3

Maybe HW1 should have not been the first homework. I think HW1 and HW2 need to swap places.

More time for HW1 would be appreciated - did not have time for Duck Hunt as HMM took a lot of time to implement.

I got stuck for many, many hours at some point because the example outputs provided did not cover a corner case that was fairly easy to get wrong by mistakingly exchanging an i for a j. Other than that, HW1 was mostly a matter of transcribing the

algorithms outlined to C++ code, which wasn't as informative as maybe I had thought.

It was heavy but good and fun :). Forced me to learn a lot!

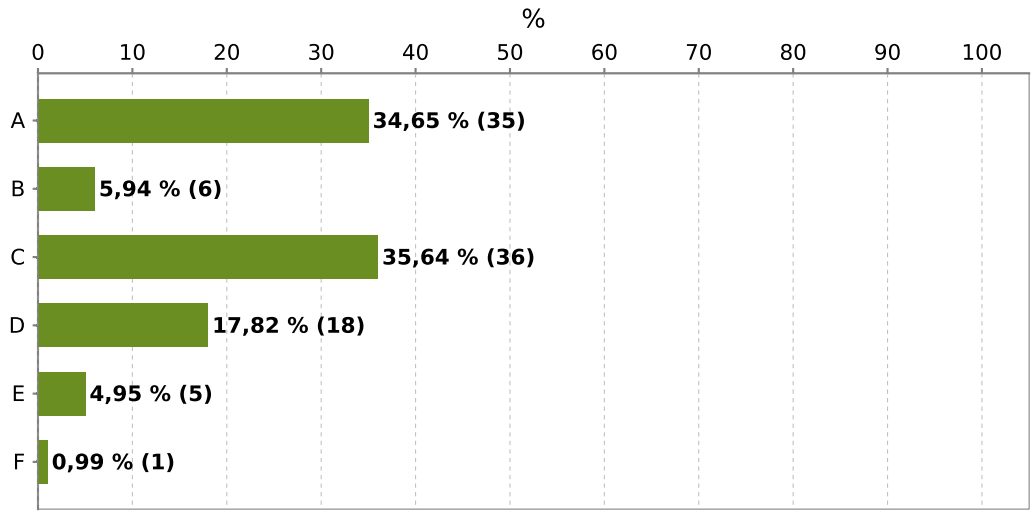
HW1 was HMM. Overall the homework is just about implementation and it does not help understanding the theory. Optimizing towards a good Kattis score is just a waste of time.

In general HW1 is very fun, but it seems the success really depends on if you start with guessing or shooting. I've started with shooting and after 3-4 days of work was disappointed because it was far from 200 KATTIS score I thought to get from shooting (in general shooting is of course harder). Then I spoke to some students and they told me they scored near 400 just by guessing. After I removed all my shooting code and started working on guessing, I also managed to score near 400 and then just added something like 50-70 for shooting and passed KATTIS.
As HW1 has the name "Duck Hunt" it's logical that at least one half of the score should be for shooting. To make it clear, it's not bad to score 400 just by guessing, I really learnt a lot from this guessing part, like about the fact that initial conditions matter or that there exist Baum-Welch for multiple observation sequences, but then either the assignment should be named differently, or the KATTIS score should be restricted to scoring, say at least 150 on both shooting and guessing.

The C level was not hard to reach. Duck hunting really force you to think how you can apply HMM model to application.

50 have answered of 423 (11%)

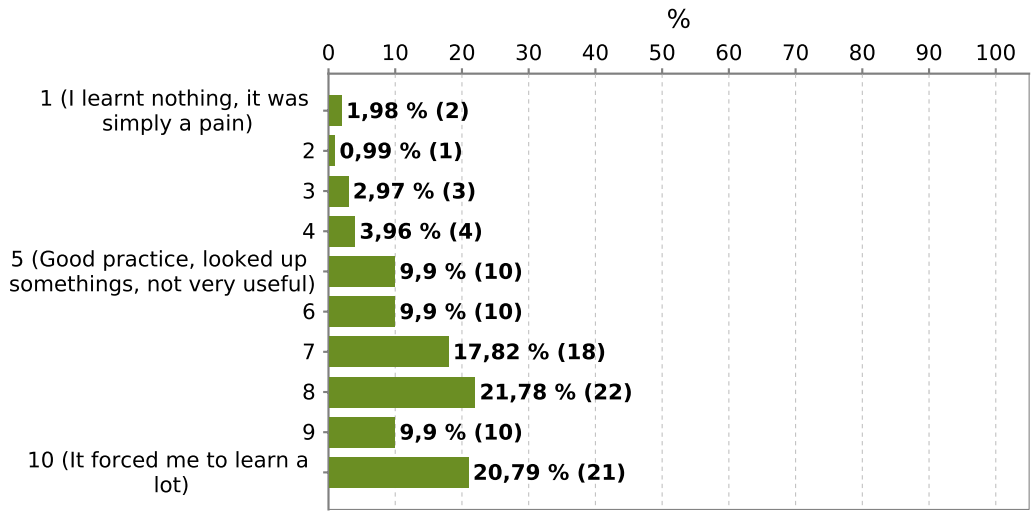
What grade did you get in HW2? (remember this is anonymous) Used to better interpret the results to see if the distribution matches that of the overall results of the course or if it is biased.



Number	Distribution	Answer choice
65	34,8%	A
11	5,9%	B
67	35,8%	C
33	17,6%	D
10	5,3%	E
1	0,5%	F

187 have answered of 423 (44%)
Maximum number of choices: 1

How useful do you think HW2 was for you to learn the course content?

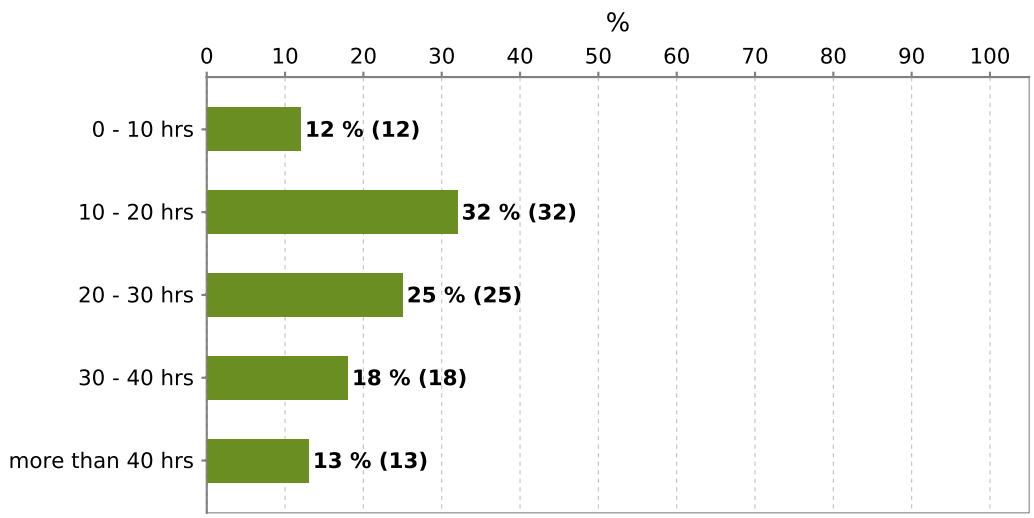


Number	Distribution	Answer choice
3	1,6%	1 (I learnt nothing, it was simply a pain)
2	1,1%	2
5	2,7%	3
7	3,8%	4
18	9,7%	5 (Good practice, looked up somethings, not very useful)
18	9,7%	6
34	18,4%	7
40	21,6%	8
19	10,3%	9
39	21,1%	10 (It forced me to learn a lot)

Average (for numeric answers): 7,39

185 have answered of 423 (43%)
Maximum number of choices: 1

How much time do you estimate you (individually) have spent on the HW2? (Excluding the final oral exam)

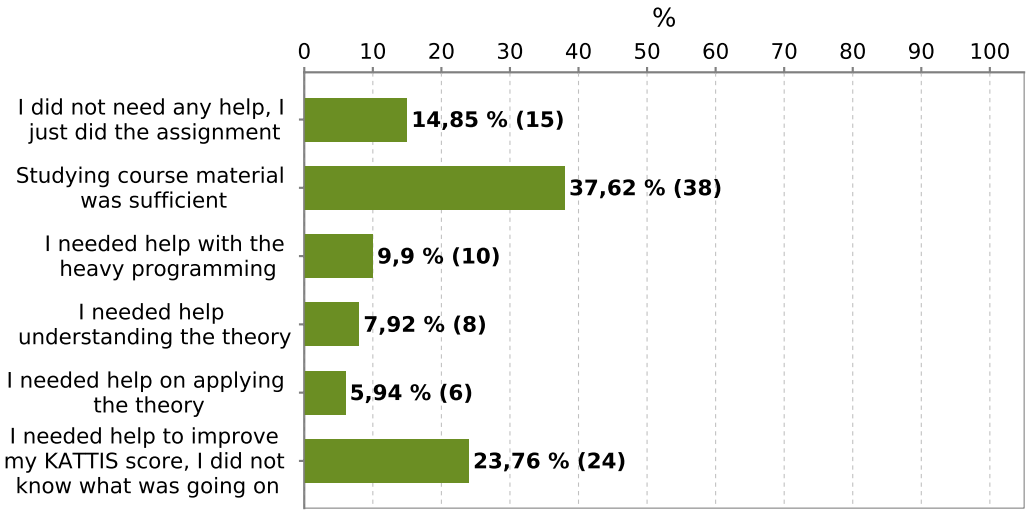


Number	Distribution	Answer choice
22	11,8%	0 - 10 hrs
59	31,7%	10 - 20 hrs
47	25,3%	20 - 30 hrs
33	17,7%	30 - 40 hrs
25	13,4%	more than 40 hrs

Average (for numeric answers): 15,65

186 have answered of 423 (43%)
Maximum number of choices: 1

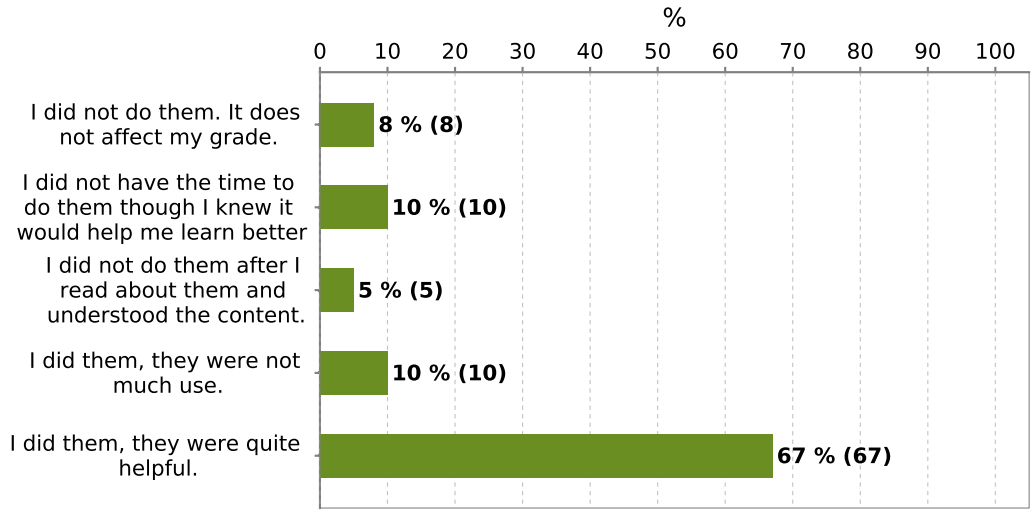
What kind of help did you need with respect to HW2?



Number	Distribution	Answer choice
27	14,5%	I did not need any help, I just did the assignment
70	37,6%	Studying course material was sufficient
19	10,2%	I needed help with the heavy programming
15	8,1%	I needed help understanding the theory
11	5,9%	I needed help on applying the theory
44	23,7%	I needed help to improve my KATTIS score, I did not know what was going on

186 have answered of 423 (43%)
Maximum number of choices: 1

How useful was it to do the preparatory hmm1, hmm2, hmm3, hmm4 exercises?



Number	Distribution	Answer choice
15	8,4%	I did not do them. It does not affect my grade.
17	9,6%	I did not have the time to do them though I knew it would help me learn better
9	5,1%	I did not do them after I read about them and understood the content.
17	9,6%	I did them, they were not much use.
120	67,4%	I did them, they were quite helpful.

178 have answered of 423 (42%)
Maximum number of choices: 1

Additional overall comments about HW2

Text answers:

The sharp limit of score to have a a certain grade is harsh when it is just about parameter tuning or if we do not have any help.

The exercises were reasonably helpful but I just used sources I found online.

Very fun and you learn a lot.

Time spent on this simply felt impossible due to other time restrictions

a lot of fun!

Once again, it consumed all my waking hours.

I think a kattis score of 97 for the C part does not mean that the code is better but just that kattis evaluates codes in a certain way. I think we should aim for less score but more features like the hashtable to prevent repeating a branch more than once.

-

We used very simple alpha-beta pruning without any advanced algorithm and managed to solve Checkers... I think the assignment should focus more on implementing more advanced algorithms (such as iterative deepening) rather than focusing on Kattis score.

I don't know what is refered to here.

It was unclear who was the next player. Even when printing the game

documentation to the skeleton code

3DTTT was difficult because of time constraints. More difficult than checkers.

We spent (what we deemed to be) far too long on trying to improve our score to the necessary 96 needed for a C

The ratio of debugging to actual learning something was much better compared to HW1.
It was a good HW.

The difference between the grades was a bit weird: implementing alfa-beta pruning is not much harder than minimax, and the only thing more needed was a simple but effective evaluation function, for both C and A parts. Actually, C was more difficult, and it was a bit unintuitive that you could solve it with depth 2, whereas in checkers you could easily get to depth 9.

(Checkers) After solving the algorithmic part of the assignment, you were left to try and find some usefulness-function of the board state to improve the performance of the agent. This part felt more like checkers-theory than ML.

Hw2 is alpha beta pruning not HMM

More focus on techniques other then building evaluators.

This questionnaire should be updated to the new order of HW.

"preparatory hmm1, hmm2, hmm3, hmm4 exercises" ???
I thought HMM1-4 were required parts of HW1?

We got stuck on about 92-95 in score for a long time, so it was difficult to know what to do better to pass. It eventually needed some tweaking on some parameters.

We could learn a lot, but to get A level grade did not need that actually. It would be better to have some recommended reading materials for these homeworks

I think that HW2 was really good and in comparison to HW1 the requirements for the different grades were good.
To get the higher grades you had to think for yourself and when you came with up with reasonably good improvements of the algorithm it was not very difficult to get the required score on Kattis.

On TTT3D a LOT of time was spent simply trying to tweak the code for Kattis to give 97p. I was stuck on 95-96 points a very long time but then when I in my heuristics simply skipped looking at some diagonals I got 97p. Most other students I talked to had similar problems. Maybe it would be possible to redesign TTT3D so that the time instead could be spent on implementing iterative deepening etc which maybe would be more educational.

I had done extensive game searching development before so it was just a pain. Too much focus was on the evaluators too. Previous courses I had simply provided an evaluator so that the focus was on the actual game search rather than understanding the game being played. Would have done checkers, but it wouldn't have changed my final grade so I didn't. Also poorly documented. The bits about next or current player and perspectives were especially confusing.

Same comment as for HW1, we are always compelled to use Kattis to test our code (and not only to submit) in order to get the required score.

As mentioned, our labassistant on the examination was not satisfied with us, however I felt that this part was the one I understood the best. Also, he kept us long over the expected time for a presentation.

We ended up spending a rather unreasonable amount of time on a really stupid mistake which made our optimizations have little to no effect. There's a lot of minor things that can go wrong, which can be really frustrating to debug. I think it might be good to emphasize careful programming, rather than heuristics (we spent a lot of time thinking that the problem was our heuristic, when it was really more optimization issues).

Much easier than HW1 if aiming for E-D.

I didn't understand how to improve my 3DTTT algorithm/score on Kattis to reach a passing score.

What excercises? HMM was in HW1... I guess this question is out dated

They were mandatory were they not?

I don't think I ever heard of those preparatory excercises.

None

Checkers is a really boring game... next year do chess! ;-)

Much easier than HW1, maybe it should be balanced a bit. Might be difficult seeing as how the two different areas are very different when it comes to difficulty.

The APIs were confusing, e.g. which player am I, who starts, getNextPlayer() but no getCurrentPlayer(), in checkers the first player who cannot do a move *wins* because then the opponent has made a "pass" move, etc. Much more struggling with APIs than with the real work (which was just copy-pasting alpha-beta search from the pdf).

Issues with Kattis very evident here.

I almost lost all hope.

If not for a simple bug I introduced it would take 0-10 hours probably. The theory was very understandable

Although Homework 2 was meant to be something done in group,I was asked to redo the second one as I did not implement alpha beta pruning in TTT2.

No comments

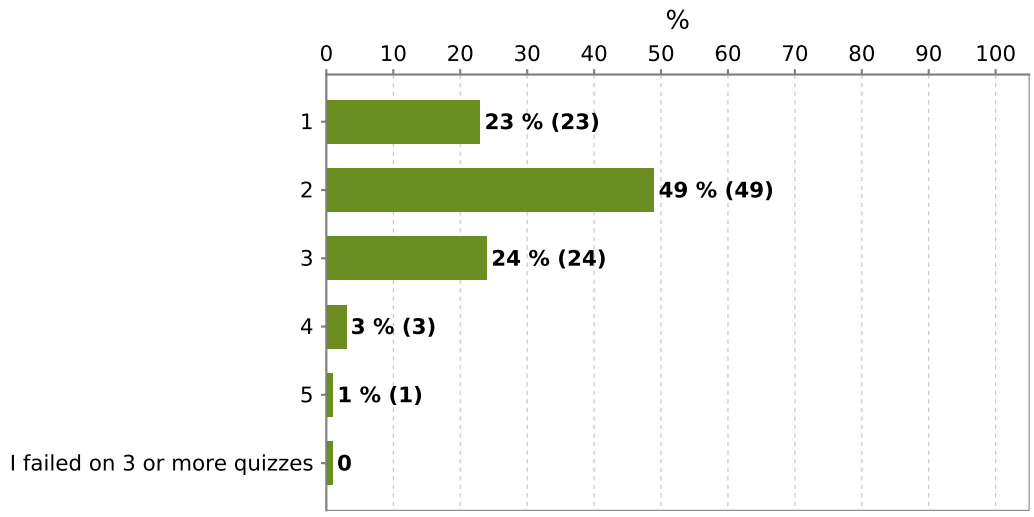
HW2 was search. The homework is poorly related to the course material. I did not learn anything.

Really fun homework, but I spent more time on studying rules of checkers to come up with good heuristics, then on implementing Minimax search or Alpha-beta pruning :)

Very useful because we could started with something small and makes sure it works correctly.

45 have answered of 423 (10%)

How many attempts did you take on an average to complete the quizzes?

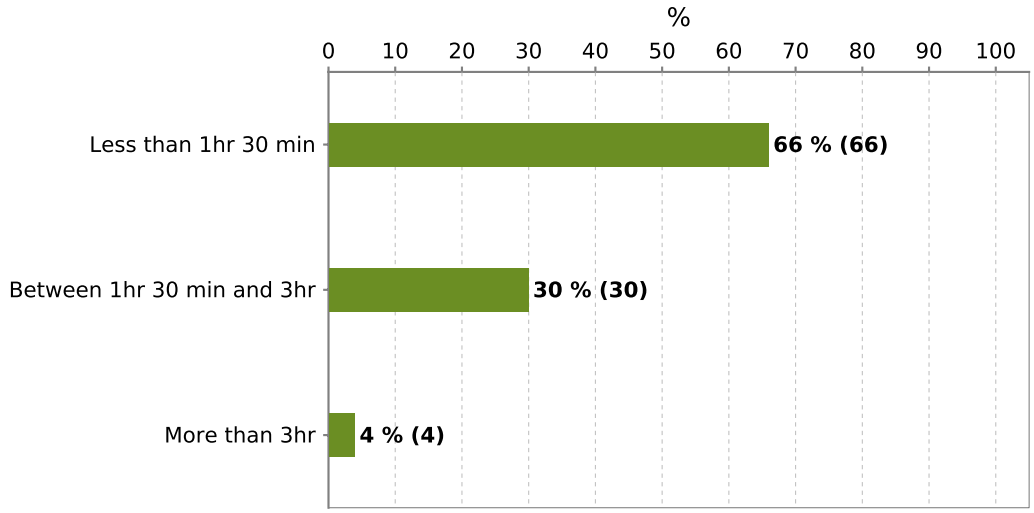


Number	Distribution	Answer choice
43	22,6%	1
94	49,5%	2
46	24,2%	3
6	3,2%	4
1	0,5%	5
0	0%	I failed on 3 or more quizzes

Average (for numeric answers): 2,09

190 have answered of 423 (44%)
Maximum number of choices: 1

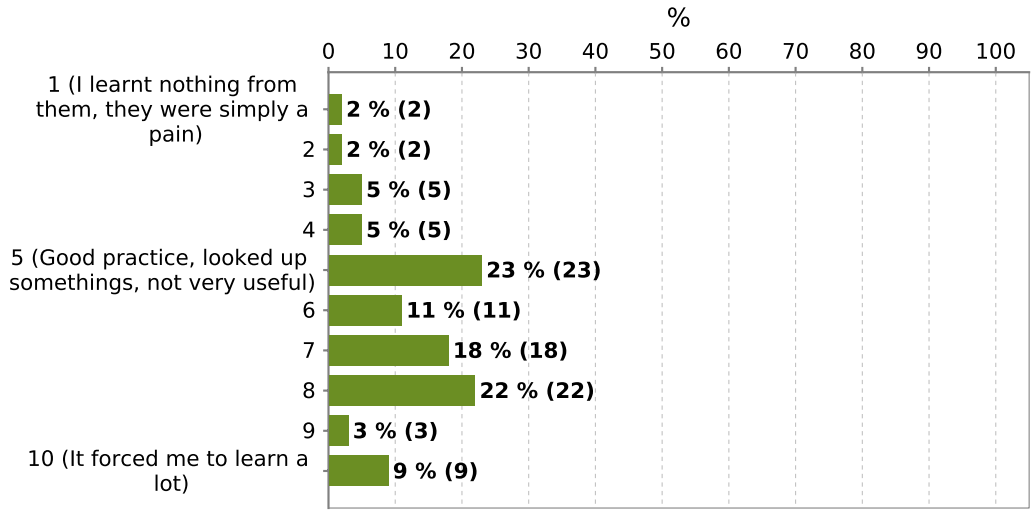
How much time on an average did you spend on each quiz? (Includes repeated attempts, preparation time etc.)



Number	Distribution	Answer choice
125	66,1%	Less than 1hr 30 min
56	29,6%	Between 1hr 30 min and 3hr
8	4,2%	More than 3hr

189 have answered of 423 (44%)
Maximum number of choices: 1

How useful do you think the quizzes were for you to learn the course content?



Number	Distribution	Answer choice
4	2,1%	1 (I learnt nothing from them, they were simply a pain)
4	2,1%	2
9	4,7%	3
9	4,7%	4
43	22,6%	5 (Good practice, looked up somethings, not very useful)
21	11,1%	6
35	18,4%	7
41	21,6%	8
6	3,2%	9
18	9,5%	10 (It forced me to learn a lot)

Average (for numeric answers): 6,44

190 have answered of 423 (44%)
Maximum number of choices: 1

Additional overall comments about Quizzes

Text answers:

more difficult the quizzes please.

Did not take them this year.

Good way of checking that one know the basic stuff.

The more simple quizzes were great. I learnt stuff since it was sort of easily graspable.
For the other quizzes like Logic and Planning, it was simply a "i have no clue what im doing but now ive ruled out that this is the wrong answer"..
Hard quizzes are bad for learning

maybe if they were more difficult then I would have learnt more from them..

They were fairly easy.

Maybe we need some more questions or less attempt times, since it's not that difficult for most student to guess the true answer of most questions and pass it without understanding many important things after failed 3-4 times.

Some much harder than others!

Didn't help me learn much. I simply had the presentation slides side by side when doing the quizzes, most of the quizzes content didn't stick in my head.

Mainly a fault of my own.

It's good to get reminders of what you may have forgotten during the course but I also don't know how much of a few small quizzes I will remember in the future.

Nice examination.

Quizzes were all ok. Slides were enough to understand how stuff worked.

Nice way to examine the theory instead. They were luckily quite easy which meant that they didn't take much time, something I found pretty reasonable since the other stuff (HW1&2, essay + project) took so much time.

It was a really great idea to force students to learn the basics of the course!

Definitely a fan of using assignments/quizzes as an examination method rather than an exam. I learned very much from doing the assignments and the all-or-nothing factor an exam has is eliminated.

Fun! Kind of nerv wrecking with the whole "5 attempts" thing, but it forced me to prepare before each quiz and study the materials. Consider having more quizzes instead of essay? Or, maybe don't force ppl to meet in groups and discuss, rather use peergrade and let students peer review each others essays.

Nice thing, liked it.

I liked them.

Concise learning, this was a good part of the course. It asked about the theory and didn't require so much effort to be spent on nonrelated tasks like generic programming.

They were very easy, could have been more extensive, especially considering there were as many as 5 tries, and no exam. Very good to have a common deadline in the end of the course for the quizzes.

Difficult to not discuss some problems I couldn't get a right answer to. Overall, I prefer this examination way much more than an exam. Forced me to look up some theories and practice on them, and still have a chance for a pass.

Anything that removes an actual exam is very welcomed!

I think that the Quizzes were good. They forced you to grasp the simple concepts as the course progressed.
However, quite a lot of the questions were flawed and unclear. This is something that should be improved.
For example:
When you state that something is conditionally independent, you need to state what information is given.
I think that one of the questions on the Markov property was wrong.
There were some flaws in the concrete planning examples with PDDL.

Some questions were very hard to understand.

Prefer having quizzes instead of an exam. I you do not cheat and take help from other students you probably learn at least as much as you would do studying for an exam.

Maybe there is an imbalance between the quizzes, some are very easy, and could have been answered without reading the slides again. Some are more difficult, even after reading the slides several time and having a good understanding of the topic, because the questions are difficult to understand.

It forced me to learn to most crucial parts of the different modules

Obviously they don't require in-depth research, but I think they are an excellent way of reaching the ILO.

I think they are helpful to understand the concepts and exactly as it is mentioned "they force you to learn".
To pass the quizzes, you have to go again through the slides and understand many concepts.
Obviously, you do this before taking the quiz, but also WHILE taking it, which is probably not the best practice.

For logic and planning quizzez I had to resort to YouTube courses.

1 h 30 min? The time limit was 1 h...

Forced me to think about the basic theory.
I don't think a test should ever require 100% though, you could have randomized another question from the pool for the NLP, requiring 3/4 correct.
And that's especially when questions in it are obviously incorrect as it was during the first day, it would have been much less of a problem otherwise.

Some of the questions were not so clear, but in the end managed to answer them all.

It was a very good way of being forced to learn the course material.

useless

maybe you don't really need to include them as part of the course next time. I wanted to focus more on the hw and project, I learnt more when I did them compared to the quizzes. Just so many deadlines, rules, and extra stuff... maybe it's good to focus on the important parts more (hw, project).

Nice system, but mostly the quizzes felt very easy. Not necessarily a problem giving all the other stuff happening in the course.

Some quizzes/questions were a bit too easy and could be done just by looking in the lecture slides directly for the answers.

The only thing the course did good.

Some quizzes were good like the logic ones, but some were too easy like NLP and POMDP.

Perhaps not a good replacement for the exam, since it's easy to look things up or guess and then promptly forget about it.

They were to easy. The only one that was a bit hard was the planning-quizz, the others was basically "cmd+f" in the powerpoints.

Make one more Homework to cover some area within ML/deep learning and skip the quizzes. They were too simple in order for me to learn anything in depth. The things examined in the quizzes either had a lot of errors (some quizzes had a lot of errors, which made it impossible to understand what is right and wrong with 100% certainty and a lot of guessing went on. I was lucky though) which made me sometimes less certain about a topic than I was before doing the quiz.

Continuous examination is very good in terms of keeping up with the studies and not leaving everything for the final exam. However the quizzes should have some harder questions that require reasoning (that would also require manual grading).

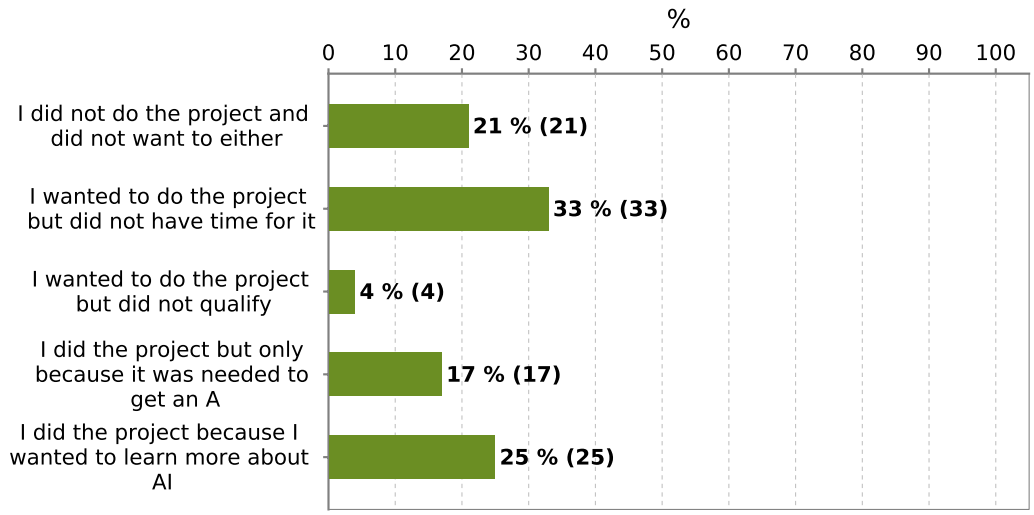
A lot of quizzes were bugged, particularly the planning quizz, that is really annoying.

Like the idea of making quizzes a part of exam! But in general 5 attempts seem to be more than needed. I'd say 3 attempts would be better and maybe improved the overall understanding as the next attempt would be more valuable.

Quizzes are not too difficult. Helped us to practice and recall.

47 have answered of 423 (11%)

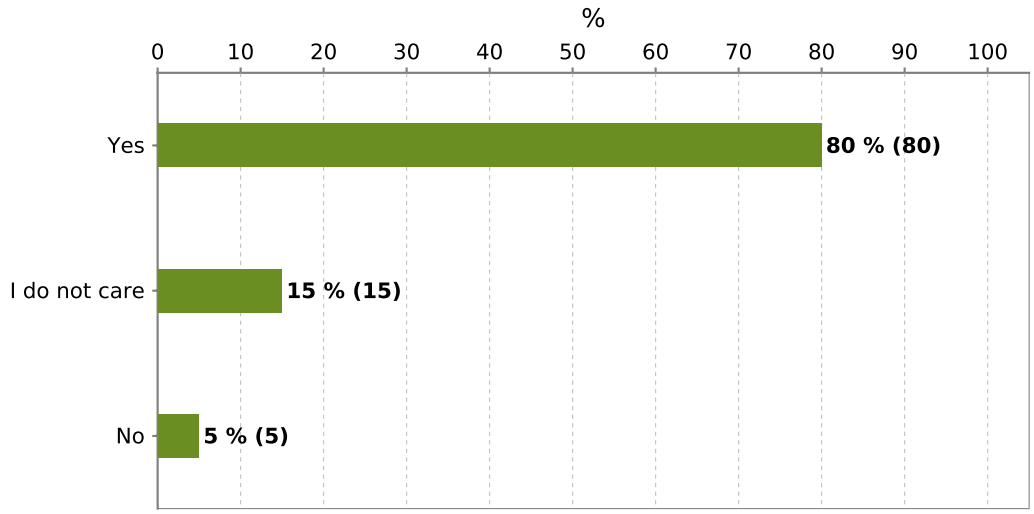
What is true for you regarding your participation in the project?



Number	Distribution	Answer choice
40	21,2%	I did not do the project and did not want to either
62	32,8%	I wanted to do the project but did not have time for it
8	4,2%	I wanted to do the project but did not qualify
32	16,9%	I did the project but only because it was needed to get an A
47	24,9%	I did the project because I wanted to learn more about AI

189 have answered of 423 (44%)
Maximum number of choices: 1

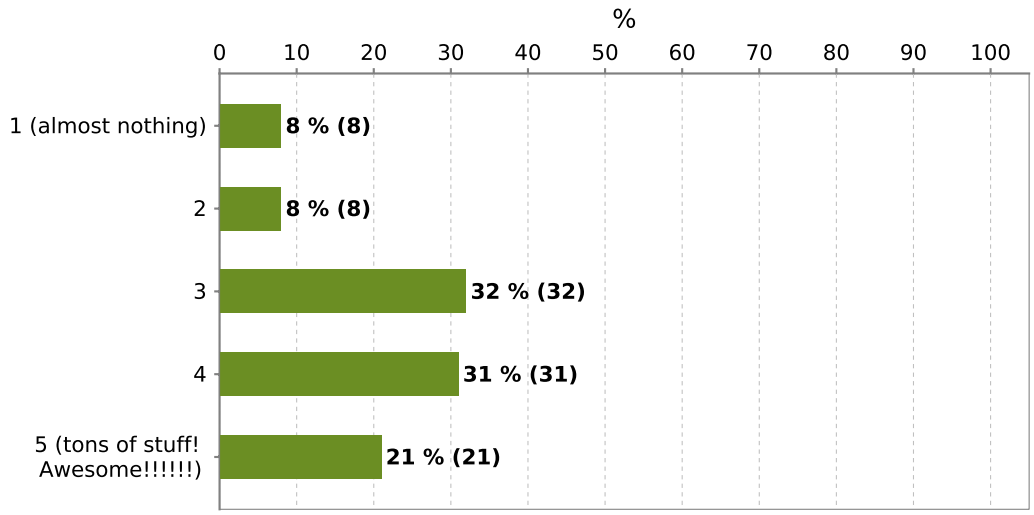
Do you think you have been fairly graded for **your** work in this group assignment? Please think about your contributions in comparison to other people in your group.



Number	Distribution	Answer choice
110	80,3%	Yes
20	14,6%	I do not care
7	5,1%	No

137 have answered of 423 (32%)
Maximum number of choices: 1

How much more did you learnt about AI doing the project?

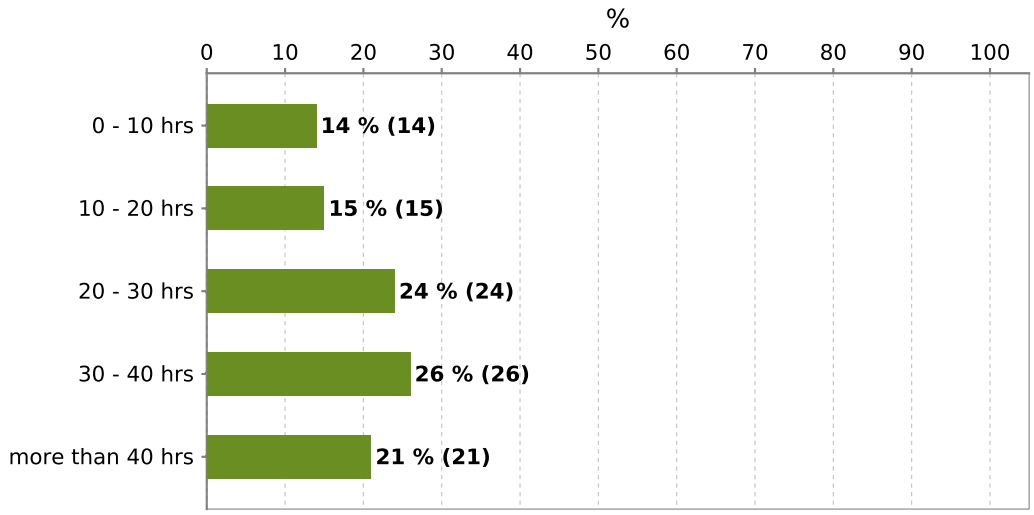


Number	Distribution	Answer choice
9	8,2%	1 (almost nothing)
9	8,2%	2
35	31,8%	3
34	30,9%	4
23	20,9%	5 (tons of stuff! Awesome!!!!!!)

Average (for numeric answers): 3,48

110 have answered of 423 (26%)
Maximum number of choices: 1

How much time do you estimate you (individually) have spent on the project? (Excluding the final oral exam)



Number	Distribution	Answer choice
13	13,7%	0 - 10 hrs
14	14,7%	10 - 20 hrs
23	24,2%	20 - 30 hrs
25	26,3%	30 - 40 hrs
20	21,1%	more than 40 hrs

Average (for numeric answers): 18

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95 have answered of 423 (22%)
Maximum number of choices: 1

Constructive feedback to Patric as a lecturer

Text answers:

Really interesting to listen to your lectures!

Very good ! Just mind the notations and formulas in the slides as student look at them after the course.

Good course, except find a way of making the coursework MUCH less time consuming. I think a lot of people didn't attempt the project because of how much time the coursework took. John Folkesson had coursework for Applied Estimation in matlab where test cases were used. We would complete a module of code and then run the test case script for that module. This sort of system could probably be implemented here and it this would save time.

Great lectures - interesting, easy to follow and understand, full of examples, informative. Thumbs up!

Very good lectures, easy to understand

Awesome!

really good at keeping the audience engaged. i liked the lightweight tone and the jokes - that helped keep me engaged throughout the whole lecture. good at explaining concepts as well.

Good lecturer!

He is awesome.

We started the project but we did not have time to finish it as we all did not have finished HW2 before the A deadline.

Well it's exactly excellent.

Good lecturer! Keep it up, I would like to see more lecturer at KTH like you!

Super!

Very good lectures.

During the project presentation Patric looked severely displeased to the pointed where he almost looked angry. I think it is the facial expression of him concentrating though, but some of my team mebers were a tiny bit intimidated by it.

He was great. We want more lecturers like him.

Put same motivation on later lectures as you did with the introductory ones. A lot of us felt that the quality of lectures deceeased quite exponentially.

Good lectures, good course overall!

He's clear and consistent

You do a good job as a lecturer.

Very interesting lecturer.

He is a good lecturer. I always liked his lectures.

Great, by far my favorite lectures and most informative!

I like your sense of humor and style of teaching in general! It decreased my effort to get up and go to the lecture in the morning.

Very nice lectures.

Great! His knowledge and sense of humor is inspiring.

Patric was downright rude and confrontational to us when we presented our project. I think such behavior is unacceptable, especially in a learning setting. Maybe we caught him on a bad day, because this is atypical of his otherwise happy, energetic attitude.

You're the best! Very interesting lectures and very friendly when you ask questions after lectures are done etc! Don't change anything, just teach more courses!

Enthusiastic, informative and clear lectures!

Swell dude, keep it up!

This is nitpicking, but I felt like you pronounced AI wrong. The first letter of the acronym (A) shouldn't be enunciated like it is in Swedish, but the second. Same goes for TV, CD etc. Also, please pronounce Js with a [dj] sound (unlike Ys which are pronounced with just a [j]). Great lectures otherwise!

http://dictionary.cambridge.org/us/pronunciation/english/ai

You are awesome at lecturing! :)

Very good teacher, fun to listen to, easy to follow. However, during our projectpresentation he was quite harsh for no apparent reason. Although I agree on his critisism, I felt that he could have said it to our face and not while we were walking out of the door. Howveer, I don't wish to dwell upon this incident, I will stick to my belief that he is quite kind. Very good lecturer.

You always feel very well-prepared and professional, while at the same time remaining very relatable and human.

Overall very good! Keep it up :)

Really good lecturer. Not many things to say. Delighted to see how to handle a class with 300 students and keep the attention on.

Excellent lecturer, had a great time taking this course. The course was both inforrmative and entertaining.

You are good lecturer, and at most times come across as a nice guy, but some times you can seem really condescending. I don't know if this is only a matter perception, but maybe still something to work on.

Great job, everything was clear, except maybe for the decision making part that required more time to be understood

Great lecturer, one of the best things about the course.

nice rhetoric! was a pleasure to listen to.

Keep doing what you're doing.

Everytime I drove to school and knew I had to sit with the AI labs I had to refrain myself to not swerve into oncoming traffic.

You're doing a good job. I'm not sure whether it's on you or not, but markov-models methods could need a few more examples.

Very good at explaining, but maybe try to write more on the board.

I enjoyed your lectures and liked the enthusiasm you brought

- Goes about teaching really fast
- High speed was evident during the initial lectures, HMMs, I was having difficulties catching up.

Very good!

It is not good that Patric do not read the project report before the presentation. Please say somewhere in the project webpage that the presentation is supposed the be self-sufficient. Received not constructive feedback about the project.

48 have answered of 423 (11%)

Constructive feedback to Jana as a lecturer

Text answers:

I found it hard to follow Jana's lectures, but it might have been because this part of the course was more difficult for me. Otherwise the content of the lectures was relevant and helpful and I thought Jana was very professional. Much appreciated!

Very good lectures, easy to understand

Trouble making the topic interesting

Awesome!

really good at explaining the concepts and answering questions. also very helpful when answering homework/project - related questions.

Very good! Easy to understand, lectures was on the right level.

Maybe you should learn more about how to make better slides from Patric? Slides now are great but I think they could be better :)

Not been on her lectures. But I heared that they were not as good as Patrics.

Lectures tend to get monotonous sometimes

Interesting lectures, but sometimes the lecture was a bit dry and hard to follow. Perhaps include some more walkthrough on the blackboard and more programming examples. The logic lessons are VERY hard to follow, maybe some exercise sessions will be nice.

During her lectures, Jana frequently breath heavily and sighed into the microphone rather loudly which made me incredibly sleepy.

She was overall awesome. We want more lecturers like her.

Make the lectures more interesting by interacting more with the dtudents. They were quite monotonous.

Good lectures, good course overall!

Jana too

Lectures became a bit dry sometimes. It seemed some of the material was covered because of course requirement

She is apparently a great researcher. But mayby she is lacking teaching skills. I didn't like the logic and planning part of the course because of the lectures. Nevertheless, I understand that she had limited time and that the topic that she was responsible for was the hardest part of the course.

Maybe it's due to the material but I found these lectures very boring and not that informative.

Sometimes, for me, the speed in your lectures was too slow, so I was not focused anymore.
However, always well prepared, good explanations, very good job! :-)

Nice lectures. My only critique: Sometimes less relevant "topics" or questions took too much of the lecture time. Things like introductions or explanations for things which were not really difficult. I think it's OK to leave the easy stuff for the students to learn on their own, it shouldn't be highlighted at the expense of the core content.

I like that Jana is energetic and cheerful, easily approachable. I only attended half of one of Jana's lectures, and my impression was that the concepts would be easier to understand from reading the slides on my own, as they weren't very hard to apply. In a maths course where it's important to see derivations and how to get certain results, lectures seem more apropos than in the AI course which is basically an exposé of methods.

A good lecturer even though I though the logic part of the course was kind of dull and formal(has nothing do do with Jana though, that was the subject itself!)! Was very kind and helpful when we asked some things about our project. Keep going in the same way!

Enthusiastic and interesting lectures!
Some of the lectures on planning became a bit abstract and you easily lost track.
Maybe it would help if you could give more small examples.

You are an exceptional lecturer and make me wanna choose Machine Learning as the specialization of my master! And your project inspiration lecture was probably the most interesting in the whole course. Really liked to see how you applied the knowledge in your own research and projects!

Very nice! I really like Jana.

Overall very good! However, sometimes the lectures felt a bit dry, and sometimes even tiring when you went into a lot of detail. But maybe thats just the topic.

I guess the feedback is more about the topic "planning" than about the professor itself.
Try to make the classes more active (some exercises maybe...). It is clear that she knows what she is talking about, but the way to communicate it was no the most interesting one.
Detail: in the slides there are written some questions that were answered orally in the lecture, but these answers do not appear on the slides. That is really annoying when you are trying to study from the slides after some weeks.

Very good, but maybe she should try not always only reading the slides.

Great job, everything was clear. I guess that logic must be hard to explain, not to mention enjoy, but the lecture was clear anyway

Try to make the logic lectures a bit more engaging. I think lessening the amount of text on each slide and giving more examples would be good.

please more explaining rather than just reading

Keep doing what you're doing.

You're doing a good job and have good examples that you can learn from.

Very good at explaining! Try to write more on the board and talk a little bit more about your own projects so we can relate everything we learn to something.

Sometimes I felt like you spent too much time explaining an easy to understand topic and then glossed over harder ones

It was great attending your lecture.Felt like listening in the class.

- Loved her lectures.
- Really explained the topics clearly and at a good pace.
- Really supportive in the project with good feedback

A little bit unclear in many situations. But good as well!

Jana gave my group a poor feedback on the project proposal. We clearly sticked to the project proposal, we have studied and implemented all that was expected, meeting all the requirements. And finally we were told that the project was not good. That was not very honest.
Besides, please make the course material better in some way, and say why the search/logic/planning part is relevant to the course, what is the point of it. I still do not understand what planning is.

38 have answered of 423 (8%)

Constructive feedback to Judith as a tutorial TA

Text answers:

It wasn't very easy to follow, but possibly because there was limited time and lots of information to convey.

Very good!

really good at explaining / clarifying concepts, especially on HMMs. Thanks a lot!

-

-

No idea who was who.

Don't remember

excellent!

Great!

Super awesome explanations and help!

Great job! Incredibly helpful

Nice! Sometimes she made me feel a little bit stupid but she was very to the point.

Helpful. Not many things to say.

<3

Sorry, no idea about your names, but all the TA were well prepared and easily available for explanations

Excellent work. Keep doing what you're doing.

Put up the answers on the slides! I feel that it could help me know that I've done the correct thing. Also sorry if you did not do the slides :)

- Confident

OK, but missed 50 % of the content for HW1 when I went to her lecture.

19 have answered of 423 (4%)

Constructive feedback to Anastasiia as a tutorial TA

Text answers:

Try to be more relaxed and speak more towards the students and less towards the whiteboard :)

Did not have the opportunity to meet this person.

i don't think I had Anastasiia as a tutorial TA

-

-

No idea who was who.

Don't remember

Sorry, no idea about your names, but all the TA were well prepared and easily available for explanations

Try to explain everything that you're doing, and face the audience. It was a bit tough to follow when I didn't understand the formulas that we were supposed to use.

- Nervous during the tutorial.
- Too fast.

Very good! I attended her HW1 after attending Judith's since Judith did only cover 50 % of the material. As a comparison, Anastasiia was then very good (since she covered 100% hehe). But Judith simply forgot to cover the other 50 %, it was not that she did not know the material and therefore did not cover it.

11 have answered of 423 (2%)

Constructive feedback to Sofia as a tutorial TA.

Text answers:

Did not have the opportunity to meet this person.

really good at explaining / clarifying concepts, especially on HMMs. Thanks a lot!

Good lecturer!

-

-

No idea who was who.

Nice and understandable lectures, good pacing. Overall good work.

Don't remember

Great!

Great tutorials, thanks!

Good explanation.

Sorry, no idea about your names, but all the TA were well prepared and easily available for explanations

Sofia helped me a lot to understand stuff about the hmm-lab.

Amazing! :)

Very good!

15 have answered of 423 (3%)

Constructive feedback to Kaiyu as a tutorial TA

Text answers:

I think his tutorial was the best. Simply explained and concise.

Did not have the opportunity to meet this person.

good at explaining / clarifying concepts and guiding students how to think about search in games.

-

-

No idea who was who.

Don't remember

Very good lesson on search!!

Really good explanation. It was clear he understood totally the concept of search and algorithms and was able to explain it in detail.

Sorry, no idea about your names, but all the TA were well prepared and easily available for explanations

Awesome.
Good tutorial, good tips, motivated the students well.

Very good!

12 have answered of 423 (2%)

Constructive feedback to Michele as a tutorial TA.

Text answers:

Did not have the opportunity to meet this person.

i don't think I had Michele as a tutorial TA

-

-

No idea who was who.

Don't remember

I'm not sure with Michele this is. If it's a guy, I didn't like him that much and he didn't seem to like me and my partner (for whatever reason I could not tell).

Sorry, no idea about your names, but all the TA were well prepared and easily available for explanations

Did not have

He asked good questions and gave us reasonable explanation. The grade was good too.

10 have answered of 423 (2%)

Constructive feedbackto the TAs examining HW1 and HW2

Text answers:

They were great - patient, asking clear questions and making it clear if our answers were correct or not and even giving more info or examples just so that we learn about them. I would have asked more questions about the code implementation.

Nice and friendly, did a good job examining the homeworks.

Very good!

they were fair/correct and nice.

Well it would be much better to talk about how we use algorithms we learnt to solve realistic problems rather than just ask if we do remember every concepts we were taught in the lecture. It's important that we do understand these things, but I don't think it's that important to remember how every concepts were described.

Don't make a crowd around the students who present their solution, It can make them unsecure and fail because of that.

Seemed like at least one of you were way more meticulous than the rest. The dude with the awesome mustache created a calm relaxed atmosphere for presenting

Good job :)

Don't be scared to slightly help a bit with hw. It motivates too!

See my comments above.

excellent! They really did a great job

When we presented HW2 we were asked a question somewhat related to the topic but also requiring knowledge of a specific boardgame we (my partner and I) had never played. The teaching assistent insisted on completing the line of questioning pertaining to the boardgame even though my partner and I obviously didn't quite understand the boardgame. This was, from our point of view, the only difficulties/problems we had in the presentation and was presumably the reason we did not obtain the top grade for this assignment.

In speaking with others after their presentations it seemed they had had much more *relevant* sets of questions during their interviews and were thus able to perform better.

Awesome

Some of the TAs on the forum were kinda rude or just useless for help. They would just point out stuff that had already been tried or done by the one posting the question or you could clearly tell from the answer of the TA that he/she didn't read the post at all or not correctly because he/she would just repeat whatever the OP already said...

Be more strict, if one seems to not understand/know what is going on, grad him/her worse (than A at least).

Nadine was great (HW1), not sure if I can give her any meaningful feedback. As previously noted, the guy who did HW2 wanted to hear exact responses and would not accept elaborations as answers. For example, on the question if minimax can be used for games with stochastic elements, we suggested using expectations and calculating minimax for the expected outcome, which coincidentally is a famous algorithm called expectiminimax. This was not sufficient as an answer to our TA, it wasn't until we said "no, minimax is not possible, because you cannot construct a game tree" that he moved on to the next question. After 40 minutes(!!!) of presentation, he gave us a B.

I don't know.

HW1 - great! Supernice girl, seemed to really be into the "concepts". Very kind. HW2 - kept us for 45 mins, wanted his answer and his answer only. Didn't try to "vibe" with us at all. We were actually really, really disappointed after this interaction.

Had two great experiences with the TA's during the HW-examination. One blonde girl examinated HW1 and Sofia (?) HW2. Their approach made you feel calm and easy, and they were nice and easy to talk to.

I really appreciated how you were able to be thorough without being aggressive. I never felt rushed or unfairly treated. I felt like I was able to prove my understanding of the material in a fair way, and learn some new stuff as well.

From what I've heard, grades could vary quite a bit depending on the TA evaluating your work. Obviously, this is not a good thing and I think some kind of common criteria should be established.
The TA's themselves were really nice and helpful. They explained us some concepts we hadn't understood well and answered the questions we asked.

The examination felt more comfortable with us sitting next to the TA and them being quite relaxed, so thanks ;)

No problem with any of them, asked interesting questions.
But for the project presentation, I felt we did not have the time to defend our project, all the more so as one of the examinators didn't read our report. We didn't need a feedback on how hard it was to follow the presentation without knowing anything on the project, but more about the Artificial Intelligence part. Maybe we would have been able to explain how deeply we thought about our artificial intelligence.

You did a great job. There were times though when the examination process seemed to have gone beyond the allocated time slot for some groups.

Michael Welle was the TA for HW1 and he really was pleasant to work with.

Good homeworks! Fun :). Good that we were not given any algorithms, so we really had to work hard and understand them!

We had different TAs examining HW1 and HW2 and they were very different in their examination. One TA basically asked us the simplest of theory questions and looked at our written down answers for the questions in the lab PM and then passed ut while the other TA sat for well over the assigned time of 10 minutes (closer to 20) asking us heavier and heavier theory questions not even looking at our implementation before finally passing us.

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27 have answered of 423 (6%)
