



Course analysis

SF2957 HT19 Statistical Machine Learning 7.5 credits

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COURSE DESIGN

Briefly describe the course design (learning activities, examinations) and any changes that have been implemented since the last course offering. The course is given in period 2 and contains 17 lectures (90 min), 4 exercise sessions, and 2 project presentation sessions. Lectures are given at the blackboard and complemented with computer demonstrations. There is one theoretical homework set where students are not graded and two graded projects. The solutions to the homework is presented in class. The projects are done in groups, there is a project discussion in class a few days before the project is due, and a presentation session where each group will present their solution to some subproblem in the project. The projects are graded P/F.

STUDENTS WORKLOAD

Does the students' workload correspond to the expected level (40 hours/1.5 credits)? If there is a significant deviation from the expected, what can be the reason? The workload is quite variable, but average is about 12 hours per week, which appears reasonable. The students responding to the questionnaire report that the workload is reasonable.

STUDENTS' RESULTS

How well have the students succeeded on the course? If there are significant differences compared to previous course offerings, what can be the reason? The students succeeded very well in the course. All students who committed to the projects passed and out of the 44 who wrote the final exam the grade distribution was A:23%; B:20%; C:11%; D:20%; E: 0%; FX:14%; F: 11%.

OVERALL IMPRESSION OF THE LEARNING ENVIRONMENT

What is your overall impression of the learning environment in the polar diagrams, for example in terms of the students' experience of meaningfulness, comprehensibility and manageability? If there are significant differences between different groups of students, what can be the reason?

The students who responded to the questionnaire seem to be very pleased with the course. They think it is a good mix of theory and projects working with real data.

ANALYSIS OF THE LEARNING ENVIRONMENT

Can you identify some stronger or weaker areas of the learning environment in the polar diagram - or in the response to each statement - respectively? Do they have an explanation?

My impression is that the students really like the projects and the format of presenting the projects in class. During the project discussion, prior to handing it in, they can discuss difficulties and clarify misconceptions. At the presentations they will see several alternative ways of solving the problem, which adds to their understanding. One student felt that it was wrong to point out errors in front of the class. I have tried to avoid this, but apparently it can be done with more care, not to embarrass students.

ANSWERS TO OPEN QUESTIONS

What emerges in the students' answers to the open questions? Is there any good advice to future course participants that you want to pass on?

The best part of the course was: -Project presentation, -Professor Hulst's commitment and structure made the course very good, -Perfect speed, -Project assignments, -Interesting project work, -Interesting theory and exercises, -Super fair exam, -Very good lecture notes -Cheat sheet was allowed in the exam - really good because then emphasis is on understanding stuff and not learning all the formulas by heart. -Great course. This course really added lots of valuable pieces (decision theory, subgradient theory, gaussian processes, RKHS...) that make the master in statistical learning feel complete. -Heavy course but it's worth it and examination was adapted to this format. -Nice combination of theory and the Projects.

PRIORITY COURSE DEVELOPMENT

What aspects of the course should primarily be developed? How could these aspects be developed in the short or long term?

One needs to develop more theoretical exercises and problems. The material on convex optimisation and stochastic approximation can also be updated and made more coherent.