COURSE ANALYSIS, graduate course

Second cycle courses, EECS School, KTH , from 2018

An asterix (*) denotes non-compulsory data.

Course data

Course name: Fundamental of Applied Machine Learning
Course ID: EP231U
Credits: 5
Credits per module: 5
Time period for course: HT2020
Teachers: Bob L. T. Sturm
Examiner: Bob L. T. Sturm
Classroom hours: twice a week for 2 hours each, eight labs 3 hours each
Nr of registered students: 32
Examination rate, in %: 100

Goals

Global course goals:
To train students to work with, develop and evaluate machine learning applications.

How the course design helps to fulfill these goals: Lectures, labs, and a group project.

Pedagogical development - I

***Changes made* since previous time course was given:**
N/A: This was the first time the course was offered.

Course evaluation; comments from students

Based on the anonymous questionnaire.

Overall student view*

It appeared to be difficult to get a high feedback rate for individual lectures, but those who did leave feedback gave some interesting perspectives and helpful suggestions. In general, for this first offering, too much material was covered in the time given. Some students suggested removing advanced topics, like reinforcement learning, and spend more time on the fundamentals. Of the nine lectures, the one that appeared to be most difficult was lecture 6 on time series analysis.

Pre-knowledge, comments*: The students had clear differences in their backgrounds. A few found the course too easy, but many seemed to find it challenging both in the mathematics and the computer programming assignments.

Course design, comments*: This offering was too dense in the time given.

Literature, comments: A variety of links to reading material was given and appeared to be appreciated by the students. The course is bespoke for Ericsson, and so a dedicated textbook is not available.

Examination, comments: No exam in this course. Final project and presentation in groups of 2-3 students. Some students found details to be lacking on what makes an acceptable project.

Course teacher's impressions from the evaluation

Comments: The student observations align with our own as to what changes should be made in the next edition.

Course teacher's summary

Overall view: The course ran smoothly online. The weekly labs worked out well. Attendance was excellent throughout the course. It was a very dense course, however. I also agree with some of the student comments that for the time-series lecture too much material was presented. Furthermore, during the lecture students should be given the opportunity to solve a problem and discuss. This will make the learning experience more interactive.

View on course material: The material is timely and appropriate for the learning objectives. The labs provided hands-on experience.

View on examination: The project quality was by and large high, given the time devoted to that portion.

Pedagogical development - II

Changes to be made **before next time course is given:**

1. **The fundamentals of the time-series subject is essentially signal processing, and treatment with neural networks constitute an advanced topic outside the scope of this introductory course. This lecture should be replaced with one looking at machine learning for sequences.**
2. **The reinforcement learning lecture should be removed.**
3. **The lectures and labs should be more spread out. No more than one lecture and one lab a week.**
4. **Examples of final projects should be made available for the students to get an idea of what is expected.**
5. **A final session should be added giving time for students to speak about their projects underway.**

Other

Comments*