Course Report WASP Graduate School

Date: 2022-12-21
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Deep Learning for Natural Language Processing, 6hp
Semester: Spring 2022

Number of registered students: 22
Answering frequency (course evaluation): 18% (4/22)

Examination results

Number of students examined: 18 (assuming those that actually participated)
Fail: 28% (5/18)
Pass: 72% (13/18)

Brief summary of student viewpoints and suggestions

Results of WASP base-line quantitative questions

- What is your overall rating of the course? (1-5)
- Did you enjoy the course? (1-5)
- Was it time well spent? (1-5)

Despite the low numbers of answers, all quantitative ratings are in the same range with very little variance and averages are 4.5, 4.5 and 4.25. A careful interpretation is that there is no student who would want to clearly criticize the course, while the majority is either indifferent or positive towards it.

Answers to free text-questions to be (shortly) summarized under "Strengths" and "Weaknesses"

- What was the best aspect of the course?
- What would you suggest improving?
- What advice would you like to give to future participants?
- Other comments. Is there anything else you would like to add?

"Strengths" according to students[2]

- Specific topics were mentioned as the best aspect, listed here to keep them as overview for further course rounds: Transformer models (Attention, GPT, BERT). Out-of distribution scenarios and domain adaptation Representing documents for neural networks. Continuous bag-of-words representations Evaluation and

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[1] *The report should be written by the examiner together with the teachers and possibly others, such as teaching assistants*

[2] *Based on both quantitative results and key viewpoints from students' free-text answers*

interpretation of word embeddings N-gram language models Evaluation of generation systems. Structured prediction. Sequence labelling, Syntactic analysis.

- The assignment design (hands-on) and the fact that everything was well-prepared and planned was appreciated

"Weaknesses" according to students[2]

- Some timing issue with the last assignment and the deadline for the project coming shortly after that.
- Some lack of really recent developments in the NLP field in the course content.

Comments from teachers on the implementation and outcome of the course[3]

- Since the 2022 course was the second time the course was given, much of the material that had been prepared for the 2020 course could be reused with some updates reflecting recent developments in the field and to improve some aspects of the 2020 course. For the 2022 course, we added one additional programming assignment, replaced one assignment, and kept one assignment unchanged.
- A flipped classroom setup has been used in the course, with pre-recorded theoretical introductions combined with hands-on sessions where students discuss some given questions and work on small practical assignments. The 2020 and 2022 courses were both taught remotely over Zoom sessions: although we expect that the course will be taught in classroom next time it is given, we are planning to keep the flipped classroom format, just replacing Zoom sessions with classroom sessions. The teachers experienced some difficulties in the Zoom sessions because students were reluctant to interact with teachers and with other students, but we believe that the regular classroom setting will make it easier for students to interact.
- We did not run into any major organizational difficulties. Students were for the most part able to solve the given programming assignments and to come up with reasonable independent projects. A few students quickly dropped out of the course while another left the course after submitting one assignment. The quality of submissions varied, as is usual in these types of courses: for the independent project, we saw some submissions that were barely passable but also some that could be turned into submissions for well-regarded conferences.

Proposed changes/comments/measures

- We are not planning a major overhaul of the course material for the next time it will be given, and the high-level structure of the course will be unchanged. Naturally, since we are working in a fast-moving research field, some new material will likely have to be added while some material will be retired. It is difficult to anticipate in 2022 what major updates will have to be carried out.

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[3] *Including changes effected during the course*