Course Report WASP Graduate School

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Authors[1]: Paul Townend (UmU), Christopher Zach (CHT), Michael Felsberg (LiU), Per-Erik Forssen (LiU)

Learning Feature Representations, 6hp
Semester: Fall 2022

Number of registered students: 31
Answering frequency (course evaluation): 8/31t (26%)

Examination results

Number of students examined: 23 (8 no shows)
Fail: 0%
Pass: 100%

Brief summary of student viewpoints and suggestions

Results of WASP base-line quantitative questions

- What is your overall rating of the course: **3.57**
- Did you enjoy the course: **3.71**
- Was it time well spent: **3.86**

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

What was the best aspect of the course?

- The seminar discussion about seminal papers.
- The course achieved a good mix of theory and practice
- Topics of first module. I liked that requirements for the projects were dynamic, you could tailor the level of ambition to the prerequisite knowledge you had.
- Generally a nice course but wasnt suitable for me specifically the 3rd module.
- Course material
- Seminars to discuss papers with the other students and the professor.
- Meeting other students.
- I learned new topics by doing HWs.

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

What would you suggest improving?

- Not everyone was well-prepared for the seminars in modules 2 and 3, and as result, those students had limited participation in the discussion. All students should be encouraged to participate.
- The "control theory" homeworks were maybe not so relevant for the course.
- Split the first module in two and merge the second and third. The second and third modules were a bit too specific, especially the lectures (the papers we had to read were good). The topics in the first module were more useful due to being more general. The first module should have been on-site and not on zoom.
- Workload was ok, lessons were ok but the third module can be improved.
- It feels like there was no communication between the lecturers at all. Would be good if the modules were at least partially connected.
- In general lectures were quite technical and not easy to understand for people outside that field. Providing more examples and high-level explanations can help.
- Would be nice to have the material in the form of lecture notes, while slides are good for presentations and lecturing, they are terrible to go back to for learning.
- The first module is structured that we have 2 full days of lectures, which contain a lot of good information but it is not possible to learn all of that in 2 days. Which is where you have to go back to the material at your own pace, which is where it would be good to have some material that is suited for that type of learning.
- It is better to hold it online, like its first module.

What advice would you like to give to future participants?

- For the seminars, prepare well at least one article, but skim all papers to be able to participate in the discussion.
- Not to wait until the last day to prepare the tasks for the next lecture.
- The projects were fun, so even though you might not have any background in the topic, I recommend trying out one/some of the optional tasks.
- Its not the easiest course so they should check the course materials carefully to see if it is suitable for them
- Get the most out of time spent at universities during lectures. Meet other students, form the groups and solve the tasks together.
- a difficult course; take it if it is relevant to your research area.

Other comments. Is there anything else you would like to add?

- Nothing

"Strengths" according to students[2]

- Good mix of theory and practice
- Meetings and discussions with other students and professors
- Dynamic project requirements / good homework

"Weaknesses" according to students[2]

- Lectures were very technical and would benefit from more high-level explanation
- Modules should be better connected
- Some students found Module 1 to have too much information; this seems to have resulted in some students having limited preparation for Module 2 and 3.

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

- We can offer to coordinate the modules further; e.g. share slides from previous instances before updating the course.
- Although there is some feedback on holding Module 1 on-site, most PhD students were rather happy not needing to travel (this is backed up by other feedback on the subject) so the suggestion is to teach module 1 online again next time.
- Comments about the amount of information in module 1 is a good point; we can share the slides and additional reading material longer in advance.
- It is infeasible to have the material in the form of lecture notes, as the topic is quickly advancing and changing, requiring at least 30% new content every iteration.
- Each lecturer has a different view on what LFR is. This is therefore presented as a varied picture between the modules, which is why some students feel there is less cohesion. Indeed, module 2 and 3 originate from the same programme. What is missing is an overview at the beginning, defining what representation learning is and how the modules exemplify different instances – this needs to be compiled jointly and presented before the course.
- Vision transformers (module 2) will definitely be a part of the next edition of the course.

Proposed changes/comments/measures

- Define an outline of what representation learning is and how the modules exemplify different instances; this will be presented before the course begins.
- Module 1 is proposed to remain online and not on-site.
- Share slides and additional reading material for Module 1 longer in advance.
- Add vision transformers to module 2.

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

[3] *Including changes effected during the course*