



Review report of a final thesis

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Student: Bc. Čeněk Žid
Thesis title: Personalized recommendations for students
Branch / specialization: Knowledge Engineering
Created on: 23 May 2022

Evaluation criteria

1. Fulfillment of the assignment

- ▶ [1] assignment fulfilled
- [2] assignment fulfilled with minor objections
- [3] assignment fulfilled with major objections
- [4] assignment not fulfilled

In this dissertation, Čeněk Žid proposed an innovative Recommender Systems strategy for providing students with personalized recommendations. The problem is especially relevant to the Recommender Systems community because the few existing publications in this domain employ simplistic analysis. The technique was successfully implemented in a real-world context (FIT's website), and it is adaptable to other scenarios requiring student employment recommendations.

2. Main written part 95 /100 (A)

The text is written well. I could detect few typos that do not detract from the work's overall quality. The format adheres to standard scientific methodology.

3. Non-written part, attachments 100 /100 (A)

The author of the thesis conducted experiments in an online setting. I would like to point out that this type of experiment is difficult to do and, despite being closer to reality, this methodology is presented in very few scientific works on recommender systems. Čeněk Žid effectively explained the experimental setups, allowing the reader to comprehend the experiments and their outcomes.

4. Evaluation of results, publication outputs and awards 100 /100 (A)

The outcome of the thesis was evaluated in a real-world setting using A/B testing procedures. I believe that, with few modifications, the concept might be used on a large

scale to actual circumstances (e.g., on commercial recommender systems for students' jobs).

The overall evaluation

98 /100 (A)

The work possesses various qualities, including a pertinent literature review, a solid chapter arrangement, and an experiment section that is highly useful to the scientific community. In light of the requirement for master's-level work, I would classify it as a great piece. A few minor refinements could improve the understanding of the work, such as a stronger connection between subsections and a graphical explanation of the approaches used (subtasks in Figure 3.1).

Questions for the defense

In section 4.5, the author disclose about fairness in Artificial Intelligence. He (correct) claim, for example, that the existence of students with few data about their past studies would make the systems provide suboptimal recommendations. However, it is well known that some kind of biasing exists in job recommendation (e.g., gender bias). Is your method aware of the existence of this kind of bias in the recommendation procedure? If not, how could you improve it?

Instructions

Fulfillment of the assignment

Assess whether the submitted FT defines the objectives sufficiently and in line with the assignment; whether the objectives are formulated correctly and fulfilled sufficiently. In the comment, specify the points of the assignment that have not been met, assess the severity, impact, and, if appropriate, also the cause of the deficiencies. If the assignment differs substantially from the standards for the FT or if the student has developed the FT beyond the assignment, describe the way it got reflected on the quality of the assignment's fulfilment and the way it affected your final evaluation.

Main written part

Evaluate whether the extent of the FT is adequate to its content and scope: are all the parts of the FT contentful and necessary? Next, consider whether the submitted FT is actually correct – are there factual errors or inaccuracies?

Evaluate the logical structure of the FT, the thematic flow between chapters and whether the text is comprehensible to the reader. Assess whether the formal notations in the FT are used correctly. Assess the typographic and language aspects of the FT, follow the Dean's Directive No. 52/2021, Art. 3.

Evaluate whether the relevant sources are properly used, quoted and cited. Verify that all quotes are properly distinguished from the results achieved in the FT, thus, that the citation ethics has not been violated and that the citations are complete and in accordance with citation practices and standards. Finally, evaluate whether the software and other copyrighted works have been used in accordance with their license terms.

Non-written part, attachments

Depending on the nature of the FT, comment on the non-written part of the thesis. For example: SW work – the overall quality of the program. Is the technology used (from the development to deployment) suitable and adequate? HW – functional sample. Evaluate the technology and tools used. Research and experimental work – repeatability of the experiment.

Evaluation of results, publication outputs and awards

Depending on the nature of the thesis, estimate whether the thesis results could be deployed in practice; alternatively, evaluate whether the results of the FT extend the already published/known results or whether they bring in completely new findings.

The overall evaluation

Summarize which of the aspects of the FT affected your grading process the most. The overall grade does not need to be an arithmetic mean (or other value) calculated from the evaluation in the previous criteria. Generally, a well-fulfilled assignment is assessed by grade A.