



# Review report of a final thesis

**Student:** Tatiana Lekýrová  
**Reviewer:** Ing. Adam Činčura  
**Thesis title:** Recommendation of new movies to obtain  
**Branch of the study:** Knowledge Engineering

**Date:** 20. 5. 2019

<i>Evaluation criterion:</i>	<i>The evaluation scale: 1 to 4.</i>
<b>1. Fulfilment of the assignment</b>	<b>1 = assignment fulfilled, 2 = assignment fulfilled with minor objections, 3 = assignment fulfilled with major objections, 4 = assignment not fulfilled</b>
<i>Criteria description:</i> 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.	
<i>Comments:</i> All the objectives were fulfilled in the thesis.	
<i>Evaluation criterion:</i>	<i>The evaluation scale: 0 to 100 points (grade A to F).</i>
<b>2. Main written part</b>	<b>60 (D)</b>
<i>Criteria description:</i> 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. 26/2017, 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.	
<i>Comments:</i> The first part contains basic overview of currently used best practices in the field of recommendation systems. Second part describing data preprocessing and solution design is very short. This results into bad readability and makes the solution hard to understand from the text of the thesis only. For example in the data preprocessing part, there are examples of the data after each step of the preprocessing pipeline. However in the samples there are never shown the 'year' and 'person' data, which are referred to in the later chapter. Also there is not shown the final data after the preprocessing, which are then used for the model training. Chapter 'Neural Networks Embeddings' (2.4.2) is talking about embeddings, but it's not clear which data are used for the embeddings generations and how are the embeddings generated. This could be extended to provide better explanation of the solution design. Chapter 3 describing the experiments could be also extended to provide more explanation to the reader. I agree that the research of the best practices is important, but the main goal of the thesis was to create experimental prototype, so I would expect that most of the thesis will be describing the prototype and the experiments and not the state of the art. Typography of the thesis is good and the citation are correct and according to the standards.	
<i>Evaluation criterion:</i>	<i>The evaluation scale: 0 to 100 points (grade A to F).</i>
<b>3. Non-written part, attachments</b>	<b>52 (E)</b>
<i>Criteria description:</i> 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.	

*Comments:*

The goal of the thesis was to create an experimental prototype.

I would expect more detailed description of the decisions being made during the solution design. From example on page 22: "... ratings, which I did not use, because I decided to focus only on selected metadata", this does not provide the answer, why it was not used.

The experiments were made on subset of the provided data (100 000 rows), it is not clear how the data were selected.

In the chapter 3.2.1, author thinks that bad results are caused by not enough data. I would except step back and selecting bigger data sample to prove the theory and also to asses if the suggested solution could work on real data.

Also I would expect more experiments being made, or more detailed experiment description if there was more experiments.

The code itself is clear and contains enough comments.

*Evaluation criterion:*

*The evaluation scale: 0 to 100 points (grade A to F).*

**4. Evaluation of results, publication outputs and awards**

55 (E)

*Criteria description:*

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.

*Comments:*

I think that tis thesis is only first small step in exploration of the domain, the prototype models cannot be used in production yet and further work is needed.

*Evaluation criterion:*

*No evaluation scale.*

**5. Questions for the defence**

*Criteria description:*

Formulate questions that the student should answer during the Presentation and defence of the FT in front of the SFE Committee (use a bullet list).

*Questions:*

How did you selected the 100 000 interactions for the model? Could it be done in a smarter way, so you wont end up with so few data?

Why didn't you used bigger data sample, when you saw that you have 900 items left after the data cleaning?

You are always showing the results per one metadata item. Did you do the experiments with all the metadata combined?

Why didn't you used more asset metadata like 'provider', 'rating' and others?

What can be next steps in improvement of model performance?

*Evaluation criterion:*

*The evaluation scale: 0 to 100 points (grade A to F).*

**6. The overall evaluation**

54 (E)

*Criteria description:*

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.

*Comments:*

Mostly affected by the non convincing experimental part. I believe there could have been done more experiments with better datasets.

Signature of the reviewer: