



Review report of a final thesis

Student: Tom Svoboda
Reviewer: Mgr. Dušan Lago
Thesis title: Benchmarking of algorithms for machine learning
Branch of the study: Web and Software Engineering

Date: 22. 1. 2021

<i>Evaluation criterion:</i>	<i>The evaluation scale: 1 to 4.</i>
1. Fulfilment of the assignment	1 = <u>assignment fulfilled</u>, 2 = assignment fulfilled with minor objections, 3 = assignment fulfilled with major objections, 4 = assignment not fulfilled
<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> The submitted final thesis fulfills the assignment in full scope.	
<i>Evaluation criterion:</i>	<i>The evaluation scale: 0 to 100 points (grade A to F).</i>
2. Main written part	70 (C)
<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 extent of the thesis is adequate. Text is cohesive and comprehensible. Citation ethics are respected. Some of the presented statements are missing supporting explanation. There are minor typographic and language mistakes.	
<i>Evaluation criterion:</i>	<i>The evaluation scale: 0 to 100 points (grade A to F).</i>
3. Non-written part, attachments	95 (A)
<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.	
<i>Comments:</i> The tool itself is a distributed system. It's composed of generic services that required configuration, REST API server, and model runner. Code is clean, well structured, and follows the single-responsibility principle. Documentation helps with the setup but a section for first-time users and usage.	
<i>Evaluation criterion:</i>	<i>The evaluation scale: 0 to 100 points (grade A to F).</i>
4. Evaluation of results, publication outputs and awards	80 (B)
<i>Criteria description:</i> 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.	
<i>Comments:</i> The output of the thesis is a working tool that can be deployed in practice. It is most suitable for companies benchmarking customer-tailored models.	
<i>Evaluation criterion:</i>	<i>No evaluation scale.</i>

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:

- * Would it be possible to abstract the domain model and make the tool more generally usable?
- * Could you argue why the data chosen for the experiment are representative?

Evaluation criterion:

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

6. The overall evaluation

75 (C)

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:

The thesis contains deeper explanations of various model evaluation protocols and metrics. These are used to build the non-written part of the thesis. The student showed that these theoretical topics were well understood and enabled him to fulfill the thesis goals. Performed experiment highlight the usefulness of the tool. As part of the thesis, the student defines the automating evaluation methodology supported with an illustrative flow diagram.

Some of the statements would deserve broader justifications.

Signature of the reviewer: