



# Review report of a final thesis

**Student:** BA. Pragalbha Lakshmanan  
**Reviewer:** RNDr. Jakub Klímeč, Ph.D.  
**Thesis title:** Enrichment of the DBpedia NIF dataset  
**Branch of the study:** Software Engineering

**Date:** 3. 6. 2020

<i>Evaluation criterion:</i>	<i>The evaluation scale: 1 to 4.</i>
<b>1. Fulfilment of the assignment</b>	<b>1 = assignment fulfilled, 2 = <u>assignment fulfilled with minor objections</u>, 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 points of the assignment were fulfilled. The goals of the thesis are clearly defined and their context well described. However, the main result of the thesis is merely a set of simple Python scripts executing selected existing methods from NLP libraries, enhancing the DBpedia NIF dataset with the results of the selected NLP methods. The implementation of the scripts and their documentation does not follow the basic principles of describing the process of software development. Since the assignment does not specify the form of implementation expected, it can only be stated that it is quite crude.	
<i>Evaluation criterion:</i>	<i>The evaluation scale: 0 to 100 points (grade A to F).</i>
<b>2. Main written part</b>	<b>50 (E)</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 textual part of the thesis contains formal errors: - Grammatical errors both in the English text and the Czech abstract - Typographical errors, for instance badly formatted code and data (e.g. Listing 2.3 (page 13)), badly formatted machine commands (e.g. section 4.2), no references to numbered listings and tables from the text - Pseudocode (e.g. Listing 3.5 on page 35) refers to another pseudocode using "previous pseudocode", which is 4 pages back, instead of precise identification.  The main issue is that the main contribution in Section 3 (sections 3.3. and later) is structured as a detailed walkthrough of the rather simple python scripts, focusing on insubstantial technical details like description of cycles and initial values of variables. This makes the text hard to read and the real contribution obfuscated. Instead, the typical "Analysis", "Design", "Implementation" parts would be appropriate.  The Experimentation section contains runtimes for various tasks and libraries. However, it lacks the hardware specifications of the machine used to do the experiments, which invalidates the results.	
<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>50 (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 software part is a set of python scripts published on GitHub, along with a guide on how to run them. The scripts are not commented and they do not seem to follow any particular code style. The guide, contains some weird steps (see STEP 2 on page 62) like text-processing of shell scripts cloned from the repository (why? and why couldn't they be correct in the repository?). Also, the scripts do not run if additional, unspecified prerequisites are not installed (e.g. python-is-python3 - the scripts expect "python" to be an executable, whereas, on some systems, it was actually python3). The scripts also contain some hardcoded file paths using, e.g. uppercase letters, which is unusual in some (Linux-based) systems. Finally, the guide to integrating new library to the tool (section 4.4., page 65) is far from developer-friendly

*Evaluation criterion:*

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

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

60 (D)

*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:*

Even though the text and the scripts seem of rather lower quality, the enrichment of the input dataset was achieved. It is, however, unclear, whether the resulting dataset was actually used anywhere or appreciated by the DBpedia community.

*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:*

1. Is the resulting dataset published and used by anyone for anything?
2. Is 5 hours runtime (page 68) a good or a bad result for sentence splitting of 5M texts?

*Evaluation criterion:*

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

**6. The overall evaluation**

50 (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:*

- The main contribution in the textual part is hard to read and concentrates in great lengths on technical details (long textual descriptions of rather simple pseudocode) instead of being properly structured according to normal software engineering practices.
- The experiments state absolute timings for runtime, however, there is no HW specification present and there is no conclusion as to whether the results are actually good or bad.
- The textual part also has a significant amount of formal and stylistic issues.
- The software part of the thesis seems quite weak for a master thesis and the resulting enriched dataset is not published anywhere (like on Zenodo). This makes the results hardly usable for anyone else than the author and the supervisor.
- The main challenge identified in the assignment is the size of the input dataset. It is, however, not clear, whether the achieved results are satisfactory or not in this regard, as they are presented only absolutely, Nevertheless, the assignment was fulfilled.

Signature of the reviewer: