



## Supervisor's statement of a final thesis

**Student:** Bc. Jakub Trhlík  
**Supervisor:** Ing. Milan Dojčinovski, Ph.D.  
**Thesis title:** Fact extraction from Wikipedia article texts  
**Branch of the study:** Web and Software Engineering

**Date:** 26. 1. 2020

<i>Evaluation criterion:</i>	<i>The evaluation scale: 1 to 4.</i>
<b>1. Fulfilment of the assignment</b>	<i>1 = assignment fulfilled, <b>2 = assignment fulfilled with minor objections,</b> 3 = assignment fulfilled with major objections, 4 = assignment not fulfilled</i>
<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 ultimate goal fo the thesis was to implement a method for relation extraction from Wikipedia article texts. In general, the student fulfilled this goal with a minor objection: the student did not clearly identify the existing related methods for fact extraction, especially in the context of Wikipedia. One of those works, among the others, is LectorPlus which has not been discussed. <a href="https://github.com/matteocannaviccio/LectorPlus">https://github.com/matteocannaviccio/LectorPlus</a>	
<i>Evaluation criterion:</i>	<i>The evaluation scale: 0 to 100 points (grade A to F).</i>
<b>2. Main written part</b>	<i>40 (F)</i>
<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.	

*Comments:*

In general, the thesis is poorly written and structured.

First and foremost, the thesis chapters and sections are not numbered thus it difficult to read and follow the thesis. There are numbering issues also with the figures.

The work is also poorly motivated and positioned.

The related work has been poorly described, i.e. lack of discussion of works on relation extraction from Wikipedia.

There are issues with the referencing/citations.

The experiments section is difficult to follow and understand.

There are quite some grammatical and typographic errors.

Overall, the thesis is difficult to read, follow and understand and the actual work/results are poorly presented/described.

More detailed issues are listed below.

- The definitions numbering is confusing, starting with number 0.0.1.
- Unusual figure numbering, starting with Figure 0.1.
- Chapters and sections are not numbered.
- Lack of references, e.g. on page 3 for the properties of knowledge graphs.
- Inappropriate description of Wikipedia - the student writes: "it is a graph knowledge based website, where each node is page with full of unstructured information."
- It is unclear why there is dedicated space/content for description of Wikidata, Freebase, YAGO,... Especially since these knowledge bases are not used in the thesis.
- page 5, figure 0.2, it is unclear why "Towards a Knowledge Graph for Science" paper has been with respect to the figure.
- page 6, not referenced works/statements/claims, "GeoNames, UMBEL", "Samsung includes DBpedia data in its knowledge platform, BBC uses DBpedia, Faviki uses DBpedia for tagging."
- page 12, the image in figure 0.4 is not referenced/cited
- In several parts of the thesis, every new sentence is starting in a newline, e.g. page 12, Section Logistic Regression
- page 22, RDF, SPARQL and NIF belong to chapter 2 (background and related work) and not in the main chapter 3 (Relation Extraction from Wikipedia Articles).
- page 24, lack of an illustrating example for the JSON format
- page 24, "anotators are required to link corresponding entities only with their first mention", claim without reference
- page 25, Description of "Named entity, linking, recognition, etc." belongs to Chapter 2 (background and related work).
- page 27, Table 0.2 and 0.3 is not referenced/cited and it is unclear if the student did the NER evaluation or it was someones else work.
- page 38, "Word2vec [?]"
- page 44, unreadable formulas due to formatting problems
- page 47, Table ??
- The results achieved from the two sets of experiments (deep learning and logistic regression) are not compared/discussed.
- Chapter "Fact Extraction" on page 51, it is unclear the purpose of this chapter and why it has not been integrated as part of the (previous) experiments chapter.
- Page 52, the author writes "This extracted facts are submitted to be added to DBpedia knowledge graph." -> it is unclear when/how the facts have been submitted? who has been contacted? was this dataset announced at the DBpedia mailing list, on the dedicated Slack channel, or submitted via the DBpedia DataBus platform?

- page 52, the listing is not readable, some values in the listing are not visible.

Some typos and language issues:

- page 51, "we implemented experimented"
- page 17, " of learning learning"
- page 20, "about the text itself as it is shown in ."
- page 55, "multiple categories categories"
- page 55, "DBpedia database. and method"

*Evaluation criterion:*

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

### 3. Non-written part, attachments

85 (B)

*Criteria description:*

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 work is of good quality. The technology used is adequate and up-to-date.

The main concern is the repeatability of the work/experiments since there is lack of details on the underlying technology stack and their version used.

*Evaluation criterion:*

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

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

95 (A)

*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:*

The main results of the work is a dataset with extracted relations (facts) from Wikipedia article texts.

The dataset is of relatively high quality (around 90%) and can be imported into DBpedia.

*Evaluation criterion:*

*The evaluation scale: 1 to 5.*

### 5. Activity and self-reliance of the student

5a:  
1 = excellent activity,  
2 = very good activity,  
3 = average activity,  
4 = weaker, but still sufficient activity,  
**5 = insufficient activity**  
5b:  
1 = excellent self-reliance,  
2 = very good self-reliance,  
**3 = average self-reliance,**  
4 = weaker, but still sufficient self-reliance,  
5 = insufficient self-reliance.

*Criteria description:*

From your experience with the course of the work on the thesis and its outcome, review the student's activity while working on the thesis, his/her punctuality when meeting the deadlines and whether he/she consulted you as he/she went along and also, whether he/she was well prepared for these consultations (5a). Assess the student's ability to develop independent creative work (5b).

*Comments:*

In the first part of the supervision period, the student regularly attended the meetings and consulted the work.

However, this has significantly changed in the second part of the supervision period when the student has not regularly consulted the work.

The main problem is the fact that the student asked for feedback on the thesis just the day before the submission deadline - which is unusual and unacceptable.

This is also reflected on the quality of the thesis content.

As for the student's ability to develop independent creative work - I think the student is capable of an independent work and independent development.

*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 goal of the thesis was to develop a method for extraction of facts from Wikipedia article texts. The student fulfilled this goal, however he failed to properly describe, document and present his work. While the non-written part is of relatively good quality, the thesis is poorly written. Primarily due to insufficient activity of the student and not consulting the written part with the supervisor. I think the thesis has to be rewritten and improved.

The student has shown skills to independently deal with new technical challenges, implement own solutions and apply the knowledge and skills acquired during the studies.

Signature of the supervisor: