

# Review report of a final thesis

Czech Technical University in Prague

Faculty of Information Technology

**Student:** Bc. Lukáš Polák  
**Reviewer:** Ing. Milan Dojčinovski  
**Thesis title:** Analyzing Supreme Court Oral Arguments with Natural Language Processing  
**Branch of the study:** Knowledge Engineering

**Date:** 30. 1. 2017

<p><i>Evaluation criterion:</i></p> <p><b>1. Difficulty and other comments on the assignment</b></p>	<p><i>The evaluation scale: 1 to 5.</i></p> <p><b>1 = extremely challenging assignment,</b> <b>2 = rather difficult assignment,</b> <b>3 = assignment of average difficulty,</b> <b>4 = easier, but still sufficient assignment,</b> <b>5 = insufficient assignment</b></p>
<p><i>Criteria description:</i> Characterize this final thesis in detail and its relationships to previous or current projects. Comment what is difficult about this thesis (in case of a more difficult thesis, you may overlook some shortcomings that you would not in case of an easy assignment, and on the contrary, with an easy assignment those shortcomings should be evaluated more strictly.)</p> <p><i>Comments:</i> The main goal of the thesis is to develop a method for discourse analysis of dialogs of the Supreme Court of the United States. The thesis considers NLP techniques while analyzing the content. The student should get familiar with the content (from the Supreme Court) and how it is generated. Also, the student should get familiar with the available techniques for analysis of such content and define a method based on a selection of these techniques for prediction of the outcomes of the court dialog. Considering the difficulty of the thesis, this is a rather difficult assignment.</p>	
<p><i>Evaluation criterion:</i></p> <p><b>2. Fulfilment of the assignment</b></p>	<p><i>The evaluation scale: 1 to 4.</i></p> <p><b>1 = assignment fulfilled,</b> <b>2 = assignment fulfilled with minor objections,</b> <b>3 = assignment fulfilled with major objections,</b> <b>4 = assignment not fulfilled</b></p>
<p><i>Criteria description:</i> Assess whether the thesis meets the assignment statement. In Comments indicate parts of the assignment that have not been fulfilled, completely or partially, or extensions of the thesis beyond the original assignment. If the assignment was not completely fulfilled, try to assess the importance, impact, and possibly also the reason of the insufficiencies.</p> <p><i>Comments:</i> The student successfully fulfilled the assignment.</p>	
<p><i>Evaluation criterion:</i></p> <p><b>3. Size of the main written part</b></p>	<p><i>The evaluation scale: 1 to 4.</i></p> <p><b>1 = meets the criteria,</b> <b>2 = meets the criteria with minor objections,</b> <b>3 = meets the criteria with major objections,</b> <b>4 = does not meet the criteria</b></p>
<p><i>Criteria description:</i> Evaluate the adequacy of the extent of the final thesis, considering its content and the size of the written part, i.e. that all parts of the thesis are rich on information and the text does not contain unnecessary parts.</p> <p><i>Comments:</i> The thesis meets the criteria.</p>	
<p><i>Evaluation criterion:</i></p> <p><b>4. Factual and logical level of the thesis</b></p>	<p><i>The evaluation scale: 0 to 100 points (grade A to F).</i></p> <p><b>85 (B)</b></p>
<p><i>Criteria description:</i> Assess whether the thesis is correct as to the facts or if there are factual errors and inaccuracies. Evaluate further the logical structure of the thesis, links among the chapters, and the comprehensibility of the text for a reader.</p> <p><i>Comments:</i> In general, the thesis is correct with regards to the listed facts. As for the logical structure - the thesis could be better organized and structured. Currently, there is no clear separation between the analysis, design, implementation and evaluation parts. For example, the experiments could be described in an independent chapter than describing them along with the developed method.</p>	
<p><i>Evaluation criterion:</i></p> <p><b>5. Formal level of the thesis</b></p>	<p><i>The evaluation scale: 0 to 100 points (grade A to F).</i></p> <p><b>95 (A)</b></p>
<p><i>Criteria description:</i> Assess the correctness of formalisms used in the thesis, the typographical and linguistic aspects, see Dean's Directive No. 14/2015, Article 3.</p> <p><i>Comments:</i> Few typos have been detected however, they do not influence the quality of the thesis.</p>	
<p><i>Evaluation criterion:</i></p> <p><b>6. Bibliography</b></p>	<p><i>The evaluation scale: 0 to 100 points (grade A to F).</i></p> <p><b>95 (A)</b></p>

*Criteria description:*

Evaluate the student's activity in acquisition and use of studying materials in his thesis. Characterize the choice of the sources. Discuss whether the student used all relevant sources, or whether he tried to solve problems that were already solved. Verify that all elements taken from other sources are properly differentiated from his own results and contributions. Comment if there was a possible violation of the citation ethics and if the bibliographical references are complete and in compliance with citation standards.

*Comments:*

The student cited and based his work on relevant sources. One minor issue - no proper citation for figure 1.3 (page 10).

*Evaluation criterion:*

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

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

100 (A)

*Criteria description:*

Comment on the achieved level of major results of the thesis and indicate whether the main results of the thesis extend published state-of-the-art results and/or bring completely new findings. Assess the quality and functionality of hardware or software solutions. Alternatively, evaluate whether the software or source code that was not created by the student himself was used in accordance with the license terms and copyright. Comment on possible publication output or awards related to the thesis.

*Comments:*

The thesis brings new findings in the field of sentiment analysis and its application on processing content from court dialogs. The results can be further published as a workshop and/or conference paper.

*Evaluation criterion:*

*No evaluation scale.*

**8. Applicability of the results**

*Criteria description:*

Indicate the potential of using the results of the thesis in practice.

*Comments:*

The developed method can be used for discourse analysis of dialogs.

*Evaluation criterion:*

*No evaluation scale.*

**9. Questions for the defence**

*Criteria description:*

Formulate any question(s) that the student should answer to the committee during the defence (use a bullet list).

*Questions:*

The thesis deals with processing "offline" data - data provided in advance.

- 1) Comment whether the method can be used to perform real-time (streaming) discourse analysis of content generated, for example, by public TV debates during a political campaign.
- 2) State and explain the possible challenges and issues that might arise when performing discourse analysis on real-time generated content.

*Evaluation criterion:*

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

**10. The overall evaluation**

94 (A)

*Criteria description:*

Summarize the parts of the thesis that had major impact on your evaluation. The overall evaluation **does not** have to be the arithmetic mean or any other formula with the values from the previous evaluation criteria 1 to 9.

*Comments:*

The main goal of the thesis was to develop an NLP based technique for discourse analysis of dialogs on data from the Supreme Court of the United States. The student successfully fulfilled the assignment and successfully managed to apply the knowledge acquired during the studies. The student based his work on top of state-of-the-art methods and appropriately extended them. A minor issue of the thesis is its structure, however, it does not have a significant impact on the quality of the final work. Considering the comments above, I recommend grade A.

Signature of the reviewer: