



# Supervisor's statement of a final thesis

**Supervisor:** Rodrigo Augusto da Silva Alves, Ph.D.  
**Student:** Bc. Anastasiia Solomiia Hrytsyna  
**Thesis title:** Human Alignment of Natural Language Processing Models  
**Branch / specialization:** Knowledge Engineering  
**Created on:** 19 August 2024

## Evaluation criteria

### 1. Fulfillment of the assignment

- ▶ [1] assignment fulfilled
- [2] assignment fulfilled with minor objections
- [3] assignment fulfilled with major objections
- [4] assignment not fulfilled

In this thesis, Bc. Anastasiia Hrytsyna proposed a novel framework to assess the alignment of Large Language Models (LLMs) representations with human object concepts. LLMs are essentially composed of complex deep learning modules, which are bio-inspired models that mimic human cognitive mechanisms. The recent advancements in chat-based LLMs, such as ChatGPT by OpenAI and Bard by Google, have democratized the accessibility of these sophisticated intelligent systems. Therefore, the widespread use of LLMs underscores the necessity and interest in understanding the mechanisms behind these models, highlighting the significance of this work in the current state-of-the-art research.

By achieving this, Mrs. Hrytsyna successfully fulfilled the objectives of this project and produced a high-quality thesis.

### 2. Main written part

92 / 100 (A)

The thesis is well-written with decent English. It is organized into six chapters: Introduction, Theoretical Foundation, Related Work, Methodology, Experiments, and Conclusion. This structure is appropriate for a scientific work. While minor adjustments could be made, they do not diminish the quality of the current work. I would like to highlight that the student has effectively positioned her work within the state-of-the-art.

### 3. Non-written part, attachments

98 /100 (A)

Mrs. Hrytsyna has good programming skills and is very efficient in this task. However, I believe that the code she produced for her thesis would benefit from more comprehensive comments.

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

100 /100 (A)

The results of the thesis were submitted to the ACM Transactions on Intelligent Systems and Technology journal, which had an impact factor of 5.0 in 2022 and a citescore of 9.3. I would like to emphasize that the paper is still under review; however, we had access to the first round of reviews. Both reviewers highlighted the quality of the work and suggested minor revisions to the editor. Therefore, I evaluate the work as having possibly great impact, considering it as a master's thesis.

### 5. Activity of the student

- ▶ [1] excellent activity
- [2] very good activity
- [3] average activity
- [4] weaker, but still sufficient activity
- [5] insufficient activity

Anastasiia Hrytsyna is an excellent student. She has a strong ability to produce high-quality results, analyze data, and interpret findings effectively.

### 6. Self-reliance of the student

- [1] excellent self-reliance
- ▶ [2] very good self-reliance
- [3] average self-reliance
- [4] weaker, but still sufficient self-reliance
- [5] insufficient self-reliance

The student is very independent and creative. The only point I would raise is that she could improve her management of the written portion to reduce temporizing. This would further benefit her work and highlight her qualities. I see great potential in her self-reliance and strongly recommend that she continue her studies at the doctoral level.

### The overall evaluation

98 /100 (A)

In summary, Bc. Anastasiia Hrytsyna's thesis is of great quality, and I recommend the committee accept the thesis with a grade of A.

## **Instructions**

### **Fulfillment of the assignment**

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.

### **Main written part**

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. 52/2021, 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.

### **Non-written part, attachments**

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.

### **Evaluation of results, publication outputs and awards**

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.

### **Activity of the student**

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.

### **Self-reliance of the student**

From your experience with the course of the work on the thesis and its outcome, assess the student's ability to develop independent creative work.

### **The overall evaluation**

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.