**FACULTY
OF INFORMATION
TECHNOLOGY
CTU IN PRAGUE**

Review report of a final thesis

Reviewer:	Ing. Milan Dojčinovski, Ph.D.
Student:	Bc. Anton Bushuiev
Thesis title:	Machine learning for the design of protein–protein interactions
Branch / specialization:	Knowledge Engineering
Created on:	5 June 2023

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

The work and the thesis is perfectly aligned with the assignment. The student has fulfilled all the points of the assignment.

2. Main written part   92 / 100 (A)

The work is very well motivated and put into the context. All necessary aspects and concepts are well presented to the reader. The thesis is easy to read and follow.
The related work is well identified and referenced in the thesis.
The thesis is organized in relevant chapters which logically follow. No factual errors or inaccuracies have been detected.

There are few minor aspects that could be improved in the thesis:
- a diagram illustrating the overall approach would be nice to have
- no summary for the related work survey (chapter 3).
- the evaluation and the results could be better presented.

3. Non-written part, attachments   100 / 100 (A)

The technical implementation is very solid. The student has considered most relevant methods, technologies and datasets. The development has been executed according to the best practices.

4. Evaluation of results, publication outputs and awards   100 / 100 (A)

The student has developed a new deep learning model to staphylokinase, which introduces novelty in the field.

The overall evaluation   96 / 100 (A)

The thesis is well written and the technical implementation is very solid. Overall, the thesis is of high quality and very mature.

Questions for the defense

- Would more data or other dataset provide better overall results? Justify your answer.
- How can the model be improved?

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.

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.