

I. IDENTIFICATION DATA

Thesis title:	Abstractions Exploiting Statistical Information
Author's name:	Vasily Levitskiy
Type of thesis:	bachelor
Faculty/Institute:	Faculty of Electrical Engineering (FEE)
Department:	Department of Cybernetics
Thesis reviewer:	Rostislav Horčík
Reviewer's department:	Department of Computer Science

II. EVALUATION OF INDIVIDUAL CRITERIA

Assignment	extraordinarily challenging
<i>How demanding was the assigned project?</i>	
The project was a standard research project starting with an initial rough idea and investigating possibilities of making it precise and usable. I consider it very challenging for a bachelor project as there was no clear direction to follow to fulfil the objectives.	

Fulfilment of assignment	fulfilled
<i>How well does the thesis fulfil the assigned task? Have the primary goals been achieved? Which assigned tasks have been incompletely covered, and which parts of the thesis are overextended? Justify your answer.</i>	
The project reached all its objectives. It defines a construction transforming an abstract transition system into an MDP that allows computing the expected cost to goal rather than its worst-case lower bound. Further, it experimentally compares these two values showing that the expected cost provides a more informative heuristic. Nevertheless, making a research paper on top of the obtained results would still require some effort.	

Activity and independence when creating final thesis	B - very good.
<i>Assess whether the student had a positive approach, whether the time limits were met, whether the conception was regularly consulted and whether the student was well prepared for the consultations. Assess the student's ability to work independently.</i>	
Mr Levitskiy was working actively on the project. We discussed the proposed ideas and concepts regularly every week. He managed to finish the ideas and implement the proof of concept independently. On the other hand, to evaluate this part by the grade A, I would expect a little more independence in proposing new theoretical ideas.	

Technical level	B - very good.
<i>Is the thesis technically sound? How well did the student employ expertise in his/her field of study? Does the student explain clearly what he/she has done?</i>	
The obtained results are technically sound and nontrivial for a bachelor project. Mr Levitskiy is a smart student who is able to utilize his expertise to solve complex tasks. Nevertheless, his knowledge of MDPs could be better as it belongs to the curriculum of the study program. Apart from working on the theoretical concepts, he also showed that he is able to apply his coding skills autonomously.	

Formal level and language level, scope of thesis	B - very good.
<i>Are formalisms and notations used properly? Is the thesis organized in a logical way? Is the thesis sufficiently extensive? Is the thesis well-presented? Is the language clear and understandable? Is the English satisfactory?</i>	
The thesis is written in English at an acceptable level. The thesis structure is well organized. It introduces the necessary theoretical background, formally defines the construction of the MDP, and presents the experimental results. On the other hand, Mr Levitskiy struggles a little bit with formal academic writing, which is understandable to some extent as he is a bachelor's student.	

Selection of sources, citation correctness	A - excellent.
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THESIS SUPERVISOR'S REPORT

Does the thesis make adequate reference to earlier work on the topic? Was the selection of sources adequate? Is the student's original work clearly distinguished from earlier work in the field? Do the bibliographic citations meet the standards?

The thesis cites sufficiently relevant sources. The bibliographic references are processed by BibTeX, providing a standardized output.

Additional commentary and evaluation (optional)

Comment on the overall quality of the thesis, its novelty and its impact on the field, its strengths and weaknesses, the utility of the solution that is presented, the theoretical/formal level, the student's skillfulness, etc.

Please insert your comments here.

III. OVERALL EVALUATION, QUESTIONS FOR THE PRESENTATION AND DEFENSE OF THE THESIS, SUGGESTED GRADE

Summarize your opinion on the thesis and explain your final grading.

Even though the thesis goal was quite challenging for a bachelor project, Mr Levitskiy managed to fulfil all the required objectives. However, there is still some space for improvement regarding the formal aspects of academic writing. The grade that I award for the thesis is **B - very good**.

Date: **5.6.2023**

Signature: