

I. IDENTIFICATION DATA

Thesis title:	Robust Robot Path Planning in Known Map
Author's name:	David Otgonsuren Rico
Type of thesis :	[REDACTED]
Faculty/Institute:	[REDACTED]
Department:	Cybernetics
Thesis reviewer:	Ing. Tomáš Rouček
Reviewer's department:	Computer science

II. EVALUATION OF INDIVIDUAL CRITERIA

Assignment	[REDACTED]
<i>How demanding was the assigned project?</i>	
Work was made challenging due to the current pandemic. This required to implement most of the work in simulation and then transfer it to a proper robot. This transfer had to be done in a constrained time due to limited access to a robot. The work was usable within few hours with the real robot that the student did not see before.	

Fulfilment of assignment	[REDACTED]
<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>	
All required goals have been achieved. Navigation in a given map together with a planner and a server that manages the whole driven path of the robot has been implemented. Student additionally had to work with a different platform type that the work was focused on due to pandemic restrictions. He made a navigator for debugging purposes on this robot, even though it was not a requirement. More work could have been spent on the user comfort of the pipeline, but this was not a requirement of the work itself.	

Activity and independence when creating final thesis	[REDACTED]
<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>	
The student was active and asked questions whenever needed or necessary but was also able to work alone on clearly defined tasks. The student was able to deliver the work in a timely manner and, with little guidance, was able to integrate the work into the existing pipeline on the robot in production. I would consider this a great task given that the student didn't have any prior knowledge of real robots before this work.	

Technical level	[REDACTED]
<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 thesis covers a relatively easy solution to the planning problem but is satisfactory and is completed with other parts such as control and navigation node. These nodes definitely required a better insight into the ROS operating system utilized during the solution without using public libraries, making the work wast in scope. Implementation of the different parts of the work adheres to programming standards as well as all standards required by the robotic platform.	

Formal level and language level, scope of thesis	[REDACTED]
<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>	
Considering required level for BC students (B2), it is satisfactory, but student often uses a large number of short sentences	

which makes the text clear but somewhat hard to read. These short sentences often do not follow the same idea making the work more difficult to understand. There are few minor English mistakes in the work, but these do not affect the ability to understand the text. Otherwise, the thesis mentions all of the necessary parts and is logical in structure.

Selection of sources, citation correctness

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?

Citations, for some reason, start with the number 5 and do not appear to have any order. Used sources include different types such as papers, books, or manuals. Citations seem to be properly chosen and presented.

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.

The project required an overall pipeline that had to be implemented as a whole, making it a finished product that is usable as a standalone navigation package without other requirements.

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.

The student was able to show great independence while also being able to provide what was asked for, even extending the work by including additional debugging tools and different platform controller. English in this work is not great but is on a level expected from a bachelor student. Altogether the work of this thesis is now implemented on real robots and functions without any issues.

The grade that I award for the thesis is

Date:

[REDACTED]

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Signature: