

SUPERVISOR'S EVALUATION OF THE BACHELOR'S THESIS

Student: Muhammad Rashid Zia

Supervisor: Ing. Petr Chalupa, Ph.D.

Study program: Applied Informatics in Industrial Automation

Specialization: Intelligent Systems with Robots

Academic year: 2024/2025

Bachelor's Thesis topic: Autonomous Mobile Robot with Remote Control

Evaluation:

	A	B	C	D	E	F
	Evaluation: A – Best; F – Unsatisfactory					
1. Fulfilment of all points of the assignment	☒	☐	☐	☐	☐	☐
2. Suitability of chosen resolution methods	☐	☒	☐	☐	☐	☐
3. Division of work (chapters, subchapters, paragraphs)	☒	☐	☐	☐	☐	☐
4. Working with literature and citations	☐	☒	☐	☐	☐	☐
5. Level of linguistic elaboration	☒	☐	☐	☐	☐	☐
6. Formal level of work	☐	☐	☒	☐	☐	☐
7. Theoretical part elaboration quality	☐	☒	☐	☐	☐	☐
8. Practical part elaboration quality	☐	☒	☐	☐	☐	☐
9. Achieved results of the work	☐	☐	☒	☐	☐	☐
10. Contribution of the thesis and its exploitation	☐	☐	☐	☒	☐	☐
11. Cooperation of thesis author with the supervisor	☒	☐	☐	☐	☐	☐

Result of the plagiarism test:

The work was assessed in terms of plagiarism with the result 3 % identity. Work is not plagiarism.

Overall evaluation of the thesis:

The resulting mark is not the average of all of the abovementioned evaluations. The mark is awarded by the thesis supervisor according to their deliberations and the ECTS classification scale:

A – Excellent, B – Very good, C – Good, D – Satisfactory, E – Sufficient, F – Insufficient.

Grade F also means “I do not recommend this thesis for defence.”

I recommend this diploma thesis for its defence and suggest the following evaluation:

B - Very Good.

In the case of an “F – Insufficient” grade, provide comments and the shortages of the thesis and the reasons for this assessment.

The topic, in relation to the guidelines, was not particularly challenging. The overall difficulty level is moderate. All guidelines were fulfilled; however, some aspects of the practical part were addressed only at a basic level. The most challenging part of the project was establishing communication between the mBot and the smartphone using Bluetooth Low Energy (BLE).

There are several areas of the software that could be enhanced to bring the system closer to a practical application:

1. Safety: Implementation of periodic checks to ensure that wireless communication is active.
2. Scanning all available mBots and allowing the user to choose one to connect to

2. Advanced Sensor Processing: For example, create a map of the environment and transmit it in real time to the smartphone.
3. Manual Control Mode: Add a user-friendly interface for direct manual control of the robot.

Date: 29.5.2025

Thesis Supervisor's Signature: