

I. IDENTIFICATION DATA

Thesis title:	Fusion of data from dual RGB sensors and thermal camera
Author's name:	Ondřej Kafka
Type of thesis :	master
Faculty/Institute:	Faculty of Electrical Engineering (FEE)
Department:	Department of Computer Science
Thesis reviewer:	RNDr. Petr Štěpán, Ph.D.
Reviewer's department:	Department of Cybernetics

II. EVALUATION OF INDIVIDUAL CRITERIA

Assignment	challenging
<i>How demanding was the assigned project?</i>	
The work is challenging, the student analyzes real data from sensors, rgb cameras and thermal cameras. For this analysis he has to first take down both sensors and then he can start detecting objects.	

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 student fulfilled all points of the assignment.	

Activity and independence when creating final thesis	A - excellent.
<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 worked independently, tested all my advice and came up with new ideas for solving problems on his own. His approach to the thesis was very active and thanks to that he managed to achieve very interesting results.	

Technical level	A - excellent.
<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 aim of this work is to compare the possibilities of multi-modal detection with detection by individual data sources. In order to make the results relevant, the student had to give a lot of attention to the correct alignment of data from different sensors. This was done by testing several approaches and the resulting merged data was already accurate enough for detection. In the second part of the thesis, the student focuses on neural networks that use multi-modal data. Here he tested several approaches and evaluated them in detail. At all stages of the work, the student used the state of the art approaches to the problem under investigation.	

Formal level and language level, scope of thesis	A - excellent.
<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 very good English and has a standard scope.	

Selection of sources, citation correctness	A - excellent.
<i>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?</i>	

The student has correctly cited all sources used in the thesis.

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.

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

The student managed to meet all the objectives of the thesis at a very high level and in my opinion the results are applicable in practice. The student analyzed the source data in great detail and designed several neural networks that achieve results applicable to real deployment.

The grade that I award for the thesis is .

Date: **12.6.2024**

Signature: