

I. IDENTIFICATION DATA

Thesis title:	Open Vocabulary Object Detection with Multimodal and Generative Models
Author's name:	Nikita Sokovnin
Type of thesis :	master
Faculty/Institute:	Faculty of Electrical Engineering (FEE)
Department:	Cybernetics
Thesis reviewer:	Tomas Pajdla, supervisor
Reviewer's department:	CIIRC ČVUT

II. EVALUATION OF INDIVIDUAL CRITERIA

Assignment	challenging
<i>How demanding was the assigned project?</i>	
Please insert your comments here.	

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>	
Please insert your comments here.	

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>	
Please insert your commentary.	

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>	
Please insert your comments here.	

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>	
Please insert your comments here.	

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>	
Please insert your comments here.	

Additional commentary and evaluation (optional)
<i>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.</i>
Please insert your comments here.

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



THESIS SUPERVISOR'S REPORT

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

Nikita Sokovnin's master thesis addresses the complex and timely issue of open vocabulary object detection using multimodal and generative models. The thesis achieves three primary goals: it reviews existing methodologies in open vocabulary object detection and zero-shot image classification, proposes a novel method for identifying and labelling unknown objects, and demonstrates the learning of new classes using large language-image models.

Nikita Sokovnin demonstrated a high level of motivation, independence, and diligence. He was highly active in exploring and integrating advanced generative models for classification and detection in an open-world setup with great initiative.

The thesis makes significant contributions by introducing innovative perspectives on classification and detection within an open-world context, particularly by using the latest generative models. The proposed methods advance the current understanding and bring new approaches based on large-scale foundation models.

This is an excellent thesis that goes far beyond the standard expectations for a master's thesis.

The grade that I award for the thesis is **A - excellent**.

Date: **16.6.2024**

Signature: