

I. IDENTIFICATION DATA

Thesis name:	Visual landmark recognition with deep learning
Author's name:	Ondrej Boucek
Type of thesis :	bachelor
Faculty/Institute:	Faculty of Electrical Engineering (FEE)
Department:	Cybernetics
Thesis supervisor:	Giorgos Talias
Supervisor's department:	Cybernetics

II. EVALUATION OF INDIVIDUAL CRITERIA

Assignment	challenging
<i>Evaluation of thesis difficulty of assignment.</i>	
<p>The assigned project consists of a sequence of goals, as listed in the original project proposal, of incremental difficulty. The last item, number 5, was a very ambitious one. The required background is demanding and is related to different fields, in particular, deep learning, metric learning, image retrieval, and non-parametric classifiers. Even though instance-search is well studied in the literature, this is not the case for instance recognition. This aspect raises some difficulties; additional effort is needed to study the relevant material and put them all together in the context of the thesis.</p>	

Satisfaction of assignment	fulfilled with minor objections
<i>Assess that handed thesis meets assignment. Present points of assignment that fell short or were extended. Try to assess importance, impact or cause of each shortcoming.</i>	
<p>The final outcome and overall progress during the work on the thesis is more than satisfactory. Most points of assignment were satisfied and investigated to a good extend. Assignment point 5 was not included in the final thesis, however Ondrej did spend time to investigate and develop a relevant approach, but further investigation and much more time was needed for that.</p>	

Activity and independence when creating final thesis	C - good.
<i>Assess that student had positive approach, time limits were met, conception was regularly consulted and was well prepared for consultations. Assess student's ability to work independently.</i>	
<p>The supervisor and the student had regular interaction through teleconferences and emails. The student was most of the times prepared to provide intermediate results for discussion and make questions that helped the progress. Ondrej exhibited independence in the way of thinking and investigated some directions according to his own understanding and curiosity. The amount of devoted time was not very satisfactory because of work load related to other courses.</p>	

Technical level	B - very good.
<i>Assess level of thesis specialty, use of knowledge gained by study and by expert literature, use of sources and data gained by experience.</i>	
<p>The student significantly increased the level of understanding and developed appropriate background in the relevant areas.</p>	

Formal and language level, scope of thesis	C - good.
<i>Assess correctness of usage of formal notation. Assess typographical and language arrangement of thesis.</i>	
<p>The overall organization, flow, and state of the manuscript is good. Most of the time the writing is brief; a more detailed description would improve the knowledge transfer to the reader. The usage of mathematical notation and technical terminology is not always careful and in cases wrong or incomplete.</p>	

Selection of sources, citation correctness	B - very good.
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SUPERVISOR'S OPINION OF FINAL THESIS

Present your opinion to student's activity when obtaining and using study materials for thesis creation. Characterize selection of sources. Assess that student used all relevant sources. Verify that all used elements are correctly distinguished from own results and thoughts. Assess that citation ethics has not been breached and that all bibliographic citations are complete and in accordance with citation convention and standards.

The student has made good work in studying, understanding and presenting prior work. The literature review is in a good shape, because Ondrej covered some pieces of relevant prior work on a number of different areas that are related to the topic of the work.

Additional commentary and evaluation

Present your opinion to achieved primary goals of thesis, e.g. level of theoretical results, level and functionality of technical or software conception, publication performance, experimental dexterity etc.

III. OVERALL EVALUATION, QUESTIONS FOR DEFENSE, CLASSIFICATION SUGGESTION

Ondrej has made good progress during the work of the thesis and obtained a significant amount of knowledge on the examined field and methodologies. He managed to investigate most of the predefined goals up to a good or satisfactory extend and showed the ability to think and work independently. The experimental results give some insight that is useful for future exploration. He overcame the difficulty of dealing with a specific flavor of a task that is not well studied in the literature and managed to put the useful pieces together properly.

I evaluate handed thesis with classification grade **B - very good**.

Date: **24.8.2020**

Signature: