Supervisor's statement of a final thesis

Czech Technical University in Prague **Faculty of Information Technology**

Student:	Jan Rudolf
Supervisor:	Mgr. RNDr. Petr Štěpán, Ph.D.
Thesis title:	Detection of landing platform for drones
Branch of the study:	Computer Science

Date: 12. 6. 2017

Evaluation criterion:	*The evaluation scale: 1 to 5.*
1. Difficulty and other comments on the assignment	*1 = extremely challenging assignment,* ***2 = rather difficult assignment,*** *3 = assignment of average difficulty,* *4 = easier, but still sufficient assignment,* *5 = insufficient assignment*

Criteria description:
Characterize this final thesis in detail and its relationships to previous or current projects. Comment what is difficult about this thesis (in case of a more difficult thesis, you may overlook some shortcomings that you would not in case of an easy assignment, and on the contrary, with an easy assignment those shortcomings should be evaluated more strictly.)

Comments:
The student had to study new approaches, such as the use of MetaCenter for parallel computing and work with tools for neural networks.

Evaluation criterion:	*The evaluation scale: 1 to 4.*
2. Fulfilment of the assignment	***1 = assignment fulfilled,*** *2 = assignment fulfilled with minor objections,* *3 = assignment fulfilled with major objections,* *4 = assignment not fulfilled*

Criteria description:
Assess whether the thesis meets the assignment statement. In Comments indicate parts of the assignment that have not been fulfilled, completely or partially, or extensions of the thesis beyond the original assignment. If the assignment was not completely fulfilled, try to assess the importance, impact, and possibly also the reason of the insufficiencies.

Comments:
All assignments were fulfilled.

Evaluation criterion:	*The evaluation scale: 1 to 4.*
3. Size of the main written part	*1 = meets the criteria,* ***2 = meets the criteria with minor objections,*** *3 = meets the criteria with major objections,* *4 = does not meet the criteria*

Criteria description:
Evaluate the adequacy of the extent of the final thesis, considering its content and the size of the written part, i.e. that all parts of the thesis are rich on information and the text does not contain unnecessary parts.

Comments:
The student could better describe the structure of the created dataset and teach in more detail the results achieved, especially the comparison of different structures of neural networks and comparison with the default algorithm.

Evaluation criterion:	*The evaluation scale: 0 to 100 points (grade A to F).*
4. Factual and logical level of the thesis	*85 (B)*

Criteria description:
Assess whether the thesis is correct as to the facts or if there are factual errors and inaccuracies. Evaluate further the logical structure of the thesis, links among the chapters, and the comprehensibility of the text for a reader.

Comments:
The work is accurate and achieved results can be used for real-time landing. The student could better present the results to readers.

Evaluation criterion:	*The evaluation scale: 0 to 100 points (grade A to F).*
5. Formal level of the thesis	*90 (A)*

Criteria description:
Assess the correctness of formalisms used in the thesis, the typographical and linguistic aspect s, see Dean's Directive No. 14/2015, Article 3.

Comments:
The formal level of this work is, as bachelor's thesis, at a good level with a small number of typo errors.

Evaluation criterion:	*The evaluation scale: 0 to 100 points (grade A to F).*
6. Bibliography	*100 (A)*

Criteria description:
Evaluate the student's activity in acquisition and use of studying materials in his thesis. Characterize the choice of the sources. Discuss whether the student used all relevant sources, or whether he tried to solve problems that were already solved. Verify that all elements taken from other sources are properly differentiated from his own results and contributions. Comment if there was a possible violation of the citation ethics and if the bibliographical references are complete and in compliance with citation standards.

Comments:
The student uses relevant sources and his own work is properly differentiated from cited bibliography.

Evaluation criterion:	*The evaluation scale: 0 to 100 points (grade A to F).*
7. Evaluation of results, publication outputs and awards	*85 (B)*

Criteria description:
Comment on the achieved level of major results of the thesis and indicate whether the main results of the thesis extend published state-of-the-art results and/or bring completely new findings. Assess the quality and functionality of hardware or software solutions. Alternatively, evaluate whether the software or source code that was not created by the student himself was used in accordance with the license terms and copyright. Comment on possible publication output or awards related to the thesis.

Comments:
The student has achieved significant results, verified the possibility of landing pattern detection by neural networks, and verified the usability of algorithms for real-time system. Unfortunately, the results of the work are not well presented in the thesis.

Evaluation criterion:	*No evaluation scale.*
8. Applicability of the results	

Criteria description:
Indicate the potential of using the results of the thesis in practice.

Comments:
The results of the thesis are useful for automation of drones landing and will be used within the system at the Department of Cybernetics.

Evaluation criterion:	*The evaluation scale: 1 to 5.*
9. Activity and self-reliance of the student	*9a:* *1 = excellent activity,* ***2 = very good activity,*** *3 = average activity,* *4 = weaker, but still sufficient activity,* *5 = insufficient activity* *9b:* ***1 = excellent self-reliance,*** *2 = very good self-reliance,* *3 = average self-reliance,* *4 = weaker, but still sufficient self-reliance,* *5 = insufficient self-reliance.*

Criteria description:
Review student's activity while working on this final thesis, student's punctuality when meeting the deadlines and consulting continuously and also, student's preparedness for these consultations. Furthermore, review student's independency.

Comments:
The student worked very independently, so independently, that he write the final work without consulting me.

Evaluation criterion:	*The evaluation scale: 0 to 100 points (grade A to F).*
10. The overall evaluation	*80 (B)*

Criteria description:
Summarize the parts of the thesis that had major impact on your evaluation. The overall evaluation **does not** have to be the arithmetic mean or any other formula with the values from the previous evaluation criteria 1 to 9.

Comments:
The student has done a lot of work, especially when preparing a dataset for neural networks and when determining the influence of parameters on neural network learning. It is a pity that the student did not consult the text of the bachelor's thesis and did not give a more detailed assessment of the results achieved.

Signature of the supervisor: