



# Supervisor's statement of a final thesis

**Student:** Vojtěch Jindra  
**Supervisor:** MSc. Juan Pablo Maldonado Lopez, Ph.D.  
**Thesis title:** A statistical evaluation of player or team performance  
**Branch of the study:** Knowledge Engineering

**Date:** 18. 5. 2018

|   |   |
|---|---|
| <p><i>Evaluation criterion:</i></p> <p><b>1. Difficulty and other comments on the assignment</b></p>  | <p><i>The evaluation scale: 1 to 5.</i></p> <p><i>1 = extremely challenging assignment,<br/>2 = rather difficult assignment,<br/>3 = assignment of average difficulty,<br/>4 = easier, but still sufficient assignment,<br/>5 = insufficient assignment</i></p> |
| <p><i>Criteria description:</i><br/>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.)</p> <p><i>Comments:</i><br/>The assignment was rather open-ended, as the adaptation of skill-based ranking algorithms is not necessarily straightforward. A core part of the thesis focus on the most used approach for ranking in soccer (Elo rankings), but other methods are reviewed and extensions proposed.</p> |   |
| <p><i>Evaluation criterion:</i></p> <p><b>2. Fulfilment of the assignment</b></p>   | <p><i>The evaluation scale: 1 to 4.</i></p> <p><i>1 = assignment fulfilled,<br/>2 = assignment fulfilled with minor objections,<br/>3 = assignment fulfilled with major objections,<br/>4 = assignment not fulfilled</i></p>                                    |
| <p><i>Criteria description:</i><br/>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.</p> <p><i>Comments:</i><br/>The assignment has been fulfilled, although it remains to explore other approaches for skill-based algorithms.</p>   |   |
| <p><i>Evaluation criterion:</i></p> <p><b>3. Size of the main written part</b></p>  | <p><i>The evaluation scale: 1 to 4.</i></p> <p><i>1 = meets the criteria,<br/>2 = meets the criteria with minor objections,<br/>3 = meets the criteria with major objections,<br/>4 = does not meet the criteria</i></p>  |
| <p><i>Criteria description:</i><br/>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.</p> <p><i>Comments:</i><br/>The size is appropriate for the level.</p>  |   |
| <p><i>Evaluation criterion:</i></p> <p><b>4. Factual and logical level of the thesis</b></p>  | <p><i>The evaluation scale: 0 to 100 points (grade A to F).</i></p> <p><i>90 (A)</i></p>  |
| <p><i>Criteria description:</i><br/>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.</p> <p><i>Comments:</i><br/>I could not find any major inaccuracies, besides the reference to "big data" on the beginning of Chapter 4. The data used in the assignment is, by no means, big.</p>   |   |
| <p><i>Evaluation criterion:</i></p> <p><b>5. Formal level of the thesis</b></p>   | <p><i>The evaluation scale: 0 to 100 points (grade A to F).</i></p> <p><i>90 (A)</i></p>  |
| <p><i>Criteria description:</i><br/>Assess the correctness of formalisms used in the thesis, the typographical and linguistic aspects, see Dean's Directive No. 26/2017, Article 3.</p>   |   |

*Comments:*

The language is a bit more informal than the average academic, which allows Vojtech to express his ideas properly, without compromising the intellectual value of his work.

*Evaluation criterion:*

*The evaluation scale: 0 to 100 points (grade A to F).*

**6. Bibliography**

90 (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 choice of the sources is correct, although some references I provided are missing somehow.

*Evaluation criterion:*

*The evaluation scale: 0 to 100 points (grade A to F).*

**7. Evaluation of results, publication outputs and awards**

90 (A)

*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:*

Soccer match prediction has been treated in the literature numerous times already, it took us time to arrive to a corner where we can make a contribution. This, however, would require more time. The results obtained so far are comparable to the state of the art reported elsewhere, and to the empirical odds observed by professional sports analysts.

*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 are applicable. The performance observed in the data set of the assignment matches both the published state of the art and the empirical observations from professionals. On a validation data collected by Vojtech from his soccer games, the results match the intuitive skill level of each player.

*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:*

Vojtech was very independent in the beginning of the thesis, having chosen the topic by himself months before it was needed. I noticed a bit of lack of confidence on his own math skills, which still needs to be overcome. He was capable of working without supervision in those parts of the thesis that were closer to his comfort zone.

*Evaluation criterion:*

*The evaluation scale: 0 to 100 points (grade A to F).*

**10. The overall evaluation**

90 (A)

*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:*

I am satisfied with the quality of the thesis. It shows that Vojtech has a broad overview of the field, and is on the right way to tackle more interesting models, for instance, obtaining estimates of the player skill via Bayesian updates.

Signature of the supervisor: