FACULTY OF INFORMATION TECHNOLOGY CTU IN PRAGUE

Review report of a final thesis

Student:	Vojtěch Jindra
Reviewer:	Ing. Karel Klouda, Ph.D.
Thesis title:	A statistical evaluation of player or team performance
Branch of the study:	Knowledge Engineering

Date: 11. 6. 2018

Evaluation criterion:	*The evaluation scale: 1 to 4.*
1. 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 submitted FT defines the objectives sufficiently and in line with the assignment; whether the objectives are formulated correctly and fulfilled sufficiently. In the comment, specify the points of the assignment that have not been met, assess the severity, impact, and, if appropriate, also the cause of the deficiencies. If the assignment differs substantially from the standards for the FT or if the student has developed the FT beyond the assignment, describe the way it got reflected on the quality of the assignment's fulfilment and the way it affected your final evaluation.

Comments:
The assignment has been fulfilled. The review part especially is very rich in information. On the other hand, the algorithm evaluation part could be more verbose (see below).

Evaluation criterion:	*The evaluation scale: 0 to 100 points (grade A to F).*
2. Main written part	*85 (B)*

Criteria description:
Evaluate whether the extent of the FT is adequate to its content and scope: are all the parts of the FT contentful and necessary? Next, consider whether the submitted FT is actually correct – are there factual errors or inaccuracies? Evaluate the logical structure of the FT, the thematic flow between chapters and whether the text is comprehensible to the reader. Assess whether the formal notations in the FT are used correctly. Assess the typographic and language aspects of the FT, follow the Dean's Directive No. 26/2017, Art. 3. Evaluate whether the relevant sources are properly used, quoted and cited. Verify that all quotes are properly distinguished from the results achieved in the FT, thus, that the citation ethics has not been violated and that the citations are complete and in accordance with citation practices and standards. Finally, evaluate whether the software and other copyrighted works have been used in accordance with their license terms.

Comments:
The text is in general understandable. English is usually very good, definitely above average. What is occasionally troubling are the parts dealing with math and technical details. For instance, the author never precisely explains what is meant by the prediction ability of an algorithm. Also, the tied games are sometimes considered and sometimes not. So I am often not sure what the prediction ability means.

As for the mathematical parts, I really appreciate that there are proofs. It does not happen a lot. However, the presentation could be better. On page 11 there is the proof, but the statement is just a paragraph, not a separated proposition or theorem. (Actually, I think this proof is not necessary at all.) On the contrary, on pages 19 a 20, there is the proof of the Proposition 1 stated in the usual manner. However, the presentation could be better: I have not understood the proof before I found my own.
In Equation (3.2) the letter d is not specified. It is confusing: the reader will learn what d is on the next page.
In several cases, I find difficult to decide who is the author of the idea. The author should be more explicit on this. For instance, using Elo for players rating was whose idea?

Evaluation criterion:	*The evaluation scale: 0 to 100 points (grade A to F).*
3. Non-written part, attachments	*85 (B)*

Criteria description:
Depending on the nature of the FT, comment on the non-written part of the thesis. For example: SW work – the overall quality of the program. Is the technology used (from the development to deployment) suitable and adequate? HW – functional sample. Evaluate the technology and tools used. Research and experimental work – repeatability of the experiment.

Comments:
The attached CD contains source codes for all the experiments and also the ELO algorithm package. This package is well written and documented. The other source codes are not so tidy, but it is understandable. The web application is working but very basic.

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

4. Evaluation of results, publication outputs and awards	*95 (A)*

Criteria description:
Depending on the nature of the thesis, estimate whether the thesis results could be deployed in practice; alternatively, evaluate whether the results of the FT extend the already published/known results or whether they bring in completely new findings.

Comments:

I believe the author did a lot of work: even to comprehend the attractive and broadly studied topic had to take a lot of time. The author still managed to contribute with some own results comparable to the state-of-the-art methods. This fact makes the bachelor thesis exceptional. I believe that the work has a potential for being eventually published.

Evaluation criterion:	*No evaluation scale.*
5. Questions for the defence	

Criteria description:
Formulate questions that the student should answer during the Presentation and defence of the FT in front of the SFE Committee (use a bullet list).

Questions:

1) Explain precisely how did you calculate the prediction ability. What would be the prediction ability of baseline stupid algorithm predicting randomly the match results according to the #home win / #draw / #home losses ratio in your dataset?

2) Explain explicitly (in your presentation) what results and algorithms are your contributions and what is not.

Evaluation criterion:	*The evaluation scale: 0 to 100 points (grade A to F).*
6. The overall evaluation	*87 (B)*

Criteria description:
Summarize which of the aspects of the FT affected your grading process the most. The overall grade does not need to be an arithmetic mean (or other value) calculated from the evaluation in the previous criteria. Generally, a well-fulfilled assignment is assessed by grade A.

Comments:

As explained above, the results of the thesis are great. The presentation part is a little bit behind the quality of the results. Therefore I suggest marking this theses with B (very good).

Signature of the reviewer: