

## I. IDENTIFICATION DATA

<b>Thesis title:</b>	<b>Modelling of soccer match results for match outcome prediction</b>
<b>Author's name:</b>	<b>Nikita Zhdankin</b>
<b>Type of thesis :</b>	master
<b>Faculty/Institute:</b>	Faculty of Mechanical Engineering (FME)
<b>Department:</b>	Department of Instrumentation and Control Engineering
<b>Thesis reviewer:</b>	Ing. Cyril Oswald, Ph.D.
<b>Reviewer's department:</b>	Department of Instrumentation and Control Engineering

## II. EVALUATION OF INDIVIDUAL CRITERIA

<b>Assignment</b>	<b>challenging</b>
<i>How demanding was the assigned project?</i>	
<b>The task of the thesis is to modelling of match outcome which is the event with many non-conventional inputs, that is almost impossible to capture with a mathematical model.</b>	

<b>Fulfilment of assignment</b>	<b>fulfilled</b>
<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>	
<b>The student has fulfilled the assignment.</b>	

<b>Methodology</b>	<b>correct</b>
<i>Comment on the correctness of the approach and/or the solution methods.</i>	
<b>The student has chosen the right tools and used them correctly to achieve the aim of the work.</b>	

<b>Technical level</b>	<b>A - excellent.</b>
<i>Is the thesis technically sound? How well did the student employ expertise in the field of his/her field of study? Does the student explain clearly what he/she has done?</i>	
<b>The technical level of the thesis corresponds to the expected level of a master's thesis.</b>	

<b>Formal and language level, scope of thesis</b>	<b>A - excellent.</b>
<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>	
<b>I have no objections.</b>	

<b>Selection of sources, citation correctness</b>	<b>A - excellent.</b>
<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>	
<b>The choice of sources is fully appropriate. The student has complied with the requirements of citation ethics.</b>	

<b>Additional commentary and evaluation (optional)</b>
<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>



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

*Summarize your opinion on the thesis and explain your final grading. Pose questions that should be answered during the presentation and defense of the student's work.*

The thesis aims to predict the outcome of a football match based on historical data. A football match is an event with many non-conventional inputs like team form, player's age, match venue, etc. It is almost impossible to catch all these variables by the standard mathematical model. Therefore, the student designs his formulae to describe the team's chances to win but uses machine learning techniques to support his approach. The student did an extensive study of the phenomena affecting match outcomes, including an excellent statistical evaluation.

The main advantage of the machine learning techniques is the ability to grasp relationships leading to outcomes that are not obvious from an external perspective. As I understand, the primary input of your machine learning algorithms is the result of the prediction formulae you designed.

*Did you add some other inputs into the machine learning algorithms that are not used to calculate the input value? Otherwise, I would expect the algorithms to degrade to sophisticated input copying.*

*How much would you need to beat the bookmakers' prediction models to beat the applied margin? Ignore that the bookmakers would immediately increase the margin to remain in profit.*

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

Date: **28.6.2021**

Signature: