

**I. IDENTIFICATION DATA**

<b>Thesis title:</b>	<b>Machine learning in energy markets</b>
<b>Author's name:</b>	<b>Bc. Nikola Sokolová</b>
<b>Type of thesis :</b>	master
<b>Faculty/Institute:</b>	Faculty of Electrical Engineering (FEE)
<b>Department:</b>	Department of computers
<b>Thesis reviewer:</b>	Ing. Matej Uhrin
<b>Reviewer's department:</b>	FEE - Department of computers

**II. EVALUATION OF INDIVIDUAL CRITERIA**

<b>Assignment</b>	ordinarily challenging
<i>How demanding was the assigned project?</i>	
<i>The goal of the thesis was to compare different approaches for forecasting production of a hydropower plant, which I find to be averagely difficult as the author does not have a benchline to surpass, hence can choose the methods somewhat arbitrarily.</i>	

<b>Fulfilment of assignment</b>	fulfilled with minor objections
<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>	
The task of comparing different forecasting methods was fully fulfilled, however in Chapter 6: Conclusion the author mentions that "One of our goals was to determine whether our forecasts could assist the hydropower plant in selling electricity contracts.", which is only further commented by "Most of the actual values fell within the 95% confidence interval, suggesting our model's uncertainty estimation accurately reflects potential outcomes.". However, since there is no baseline to compare the results to, we cannot know that this result is better than the current approach.	

<b>Methodology</b>	correct
<i>Comment on the correctness of the approach and/or the solution methods.</i>	
The selected methodology was correctly chosen and executed..	

<b>Technical level</b>	A - excellent
<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>	
It is obvious from the thesis that the student spent a lot of time acquiring the domain knowledge necessary for properly executing the proposed methods. Especially data preprocessing was done very thoroughly, leading to better predictions, and tried different features for the models where it was applicable.	

<b>Formal and language level, scope of thesis</b>	B - very good.
<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>	
The thesis is well organized, however there are oftentimes grammatical mistakes and typos. The text could definitely use a second, more thorough reading. However I understand the time pressure that is always tied to finishing a thesis (we have all been there) and hence put higher weight to the content itself, which well-written and pleasant to read.	

<b>Selection of sources, citation correctness</b>	A - excellent
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*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?*

**Additional commentary and evaluation (optional)**

*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 only have one question which regards the current approach, i.e. a possible baseline. I'm very curious about what is the current approach for forecasting production and how do your models compare to it. I realize that if you knew, you would include it in your thesis, so let's simplify the question to what do you think the approach is, and if it is possible to find out.

**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 grade that I award for the thesis is **B - very good**.

Date: **15.6.2023**

Signature:

*Jindra*