

# Report on Master Thesis

Institute of Economic Studies, Faculty of Social Sciences, Charles University in Prague

<b>Student:</b>	<b>Bc. Marek Vařeka</b>
<b>Advisor:</b>	<b>Doc. PhDr. Ladislav Krištofek, Ph.D.</b>
<b>Title of the thesis:</b>	<b>Predicting purchasing intent on ecommerce websites</b>

## **OVERALL ASSESSMENT** (provided in English, Czech, or Slovak):

*Please provide your assessment of each of the following four categories, summary and suggested questions for the discussion. The minimum length of the report is 300 words.*

### **Contribution**

The thesis follows the current flow of literature that utilizes the machine learning methods and compares them with standard econometric methods. In this specific case of a classification problem deciding whether a customer buys a product or not, the baseline logit model is compared with the neural network models. The winner here is the recurrent neural network model with the long short-term memory (LSTM). Apart from the these days quite standard comparison of a machine learning and an econometrics method, the main contribution of the thesis lays in its discussion of practical implementations of the models' results.

### **Methods**

The author uses the neural networks framework in the analysis which is not currently covered in the syllabi of classes at IES, even though there are courses that slightly touch them (such as my Data Science with R). The methodology section is detailed and well-structured and it provides a nice overview of the topic even for a non-expert reader.

A non-trivial part of the thesis writing has been the dataset preparation. Even though it is a "standard" Google dataset, it was far from prepared and some quite complicated transformations and cleaning needed to be undertaken.

### **Literature**

The thesis covers all necessary literature and stays up to date. No issues found here.

### **Manuscript form**

The manuscript form is probably the weakest part of the thesis. Even though there are all necessary figures and the structure as such is fine, there are too many subsections and subsubsections in the text that disturb the reader quite a bit. Also, the language is a bit problematic and quite frequent typos (at least for a final text liking) make the reading experience and understanding bit cumbersome.

### **Summary and suggested questions for the discussion during the defense**

Overall, this is a nice thesis that certainly deserves to be easily defended. I also believe that after some polishing, the results are publishable in a scientific journal, albeit not a mainstream economics one, but rather a business/commerce journal.

The document has been checked by Urkund with a total score of 3% with practically no overlays with other texts.

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## **SUMMARY OF POINTS AWARDED** (for details, see below):

<b>CATEGORY</b>	<b>POINTS</b>
<i>Contribution (max. 30 points)</i>	28
<i>Methods (max. 30 points)</i>	29
<i>Literature (max. 20 points)</i>	18
<i>Manuscript Form (max. 20 points)</i>	16
<b>TOTAL POINTS</b> (max. 100 points)	<b>91</b>
<b>GRADE</b> (A – B – C – D – E – F)	<b>A</b>

### **NAME OF THE REFEREE:**

*doc. PhDr. Ladislav Krištofuk, Ph.D.*

**DATE OF EVALUATION: 29. 5. 2020**

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**Referee Signature**