Tomas Bata University in Zlín
Faculty of Applied Informatics

OPPONENT´S EVALUATION OF THE BACHELOR´S THESIS

Student: **Yad Ghazi Othman**   **Opponent:** **assoc. prof. Zuzana Komínková Oplatková, Ph.D.**

Study program: **Software Engineering**
Study course/Specialization:
Academic year: **2022/2023**

Bachelor's Thesis topic: **Designing a QA (Quality Assurance) Strategy for a Machine Learning application**

Evaluation of the thesis:

The thesis topic is currently highly studied and highly important for end users. The thesis covers the quality assurance (QA) strategy applied to machine learning (ML) methods.

In the theoretical part, the student describes the QA, its advantages, and machine learning approaches with advantages and disadvantages. The QA is a crucial part of the machine learning modelling for the end users, and the student highlighted the difficulties in machine learning QA.

The second part is aimed at designing QA for machine learning using the Azure Machine Learning platform and tested within a specific machine learning benchmark case – diabetes classification.

The thesis contains a lot of provided tests and suggested QA pipeline. I miss only clarifying whether the provided thesis should serve researchers to inspire in the QA pipeline or practical "instructions" on what and how it should be implemented.

Undoubtedly, a lot of work has been done, but the text would have needed some polishing before the submission.

The thesis contains several typos such as number with some other word, e.g. Figure 7depicts....

The section names are usually written as a question – What is Machine Learning, What is Supervised Training... The thesis is a technical report where Machine learning or Supervised Training is more appropriate to use.

The figures are readable but could be of better printing quality. Sometimes, there is low resolution, and the image is bigger than necessary but it does not decrease the quality of the content.

The literature is updated. However, I must admit that there is no usage of the recommended literature and only online sources such as company websites. In some cases, books or scientific papers would be more suitable.

Remarks:
The Robot Framework in Chapter 4 is not referenced, and it is unclear whose invention it is.

Questions:
1. Is the Azure platform free? If not, what is the price to be able to provide these QA tests?
2. Have you tested the strategy also with other ML methods or only Linear Regression? What would need to be changed if one would like to apply, for instance, for neural networks?

Overall evaluation of the thesis:

The Opponent shall grant a mark according to the ECTS classification scale:

A – Excellent, B – Very Good, C – Good, D – Satisfactory, E – Sufficient, F – Insufficient

An "F" grade also means "I do not recommend the thesis for defence."

I recommend this thesis to be defended and suggest the following evaluation:

B - Very Good

In the case of an evaluation grade of "F – Insufficient", please supply the main shortages and reasons for this assessment.

Date: 6. 6. 2023   Thesis Opponent's Signature: