Review of Ph.D. dissertation by Ing. Miroslav Špák

3 January 2024

To: The Faculty of Transportation Sciences, Czech Technical University in Prague

Subject: External review of Ph.D. dissertation by Ing. Miroslav Špák

After reviewing the Ph.D. dissertation titled *Data driven and machine learning playbook supporting identification of block time deviations and the assessment of their operational impact* by Ing. Miroslav Špák, I have the following comments and observations.

- The introduction section is very good and lays out the background, motivation, and research objectives.

- The methodology uses predictive modelling using a neural network approach. Specifically, a Sequence-to-one approach was used. Justification for this method is outlined in the paper and appropriate. The reasoning and methodology appear sound, and the dissertation describes the process of cleaning, converting, and combining the data in good detail. This is important in case a future researcher wishes to duplicate this research.

- Findings aligned with the research question and objectives but did not allow for acceptance or rejection of the hypothesis; however, while not the outcome that a researcher wishes, from an academic point of view, no finding is a finding.

- The dissertation has extensive spelling and grammar errors, which distract from the reading and understanding of the research. While an excellent level of English for a non-native speaker, it could be improved.

Considering the above comments and observations, I recommend that the paper be reviewed by a professional editor, but I feel the research was properly and thoroughly conducted and see no reason that it should not be approved.

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