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Peer Review

Review of: "Enhancing Project Performance Forecasting using Machine Learning Techniques"

Eugenio Vocaturo[1,2]

1. NANOTEC, National Research Council (Consiglio Nazionale delle Ricerche, CNR), Italy; 2. University of Calabria, Italy

The article explores the use of machine learning techniques for forecasting project performance in the construction industry, aiming to improve project management through advanced predictive analytics and early warning systems. It seeks to enhance the accuracy of time and cost predictions, moving beyond traditional methods like earned value management (EVM), which often overlook the dynamic nature of projects.

The paper includes a literature review, a detailed methodology for data collection and model development, and results from a case study. It emphasizes the potential of machine learning to enhance decision-making and project outcomes while recognizing its limitations and proposing future research directions to improve forecasting accuracy and applicability across various construction projects.

In my personal opinion, the paper acknowledges several limitations, which can be considered its weaknesses:

1. Reliance on a Specific Dataset: The study is based on a particular project dataset, which may limit the generalizability of the findings to other types of construction projects or contexts.

2. Assumptions Regarding External Factors: The research makes certain assumptions about the impact of external factors, which may not fully capture their complexities or variations in different scenarios.

3. Limited Scope of External Factors: While the model incorporates some external factors like weather patterns and resource availability, there may be additional factors that could influence project performance that were not considered in the study.

4. Need for Real-Time Data Integration: The paper suggests that future research could benefit from integrating real-time sensor data, which could enhance the accuracy and granularity of the forecasting model.

5. The images are not readable due to low resolution and the inadequacy of the font size.

Declarations

Potential competing interests: No potential competing interests to declare.