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Predictive Maintenance for Industrial Equipment Using Machine Learning

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Abstract: *By combining condition monitoring with predictive maintenance, the industry may significantly increase system dependability and prevent significant financial losses from unplanned motor failures. The industry uses electric engines and additional machinery. This paper presents a Random Forest-based anticipatory maintenance using machine learning architecture. Through the development of data gathering and analysis procedures, use of machine learning methodology, and comparison with simulation tool analysis, the system was evaluated on an actual industrial example. Data Analysis Tool is able to access data that has been gathered by a variety of sensors, machine PLCs, and communication protocols on the Azure Cloud architecture. Initial findings demonstrate that the method behaves appropriately when forecasting various machine states with a high degree of accuracy.*

Keywords: predictive maintenance, machine learning, random forest

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