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A Predictive Maintenance Strategy Cost-Model

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The benefit of predictive maintenance (PdM) as an enterprise strategy for scheduling repairs compared to other maintenance strategies relies heavily on the optimal use of resources, especially for SMEs: Expertise in the production process, Machine Learning Know-How, Data Quality and Sufficiency, and User Acceptance of the AI-Models have shown to be significant factors in the profit calculation. Using a stochastic model for the production cycle, we show how all these factors determine reduction of revenue and increase in maintenance cost, providing quantitative conditions for the beneficial use of PdM.

Keywords

Predictive Maintenance, Stochastic Modeling

Classification

Both methodology and application

Primary authors: Prof. BUKOVSKY, Ivo (University of South Bohemia); Mr BUDÍK, Ondřej (University of South Bohemia); Prof. KHAN, Maqbool (Pak-Austria Fachhoschule); SOBIECZKY, Florian (SCCH Software Competence Center Hagenberg)

Presenter: SOBIECZKY, Florian (SCCH Software Competence Center Hagenberg)

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