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Dynamic Data Acquisition and Preprocessing for Automatic Behavioral Modeling of Cyber-physical Systems

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Abstract

To identify the potential for optimization regarding the Overall Equipment Effectiveness (OEE) of production systems, a broad spectrum of behavior models is available. However, there are several tasks, including data extraction, data preprocessing and modeling, which are performed manually yet. This paper contributes to the automatization of the process of behavioral modelling. In this work the dynamical data acquisition and preprocessing is introduced. Both the fundamental method of ELT and its technical implementation are presented. The beneficial reduction of data volume and model complexity has been validated in a real industrial use case.

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