Abstract

This paper presents a DC motor fault diagnosis system based on Bayesian networks. This was done by the design of a new electromechanical test bed allowing the collection of functioning data from a real world industrial Direct current (DC) Motor. The data collection will help in the construction of Bayesian networks models. These data are collected from sensors measuring different types of variables that are directly related to the industrial system. Without doing any mathematical modeling that describes the physical properties of the studied DC motor, the proposed tool provides with the help of Bayesian networks parameters and structure learning algorithms, the base to construct a fault diagnosis tool that can be extended to a fault prognosis tool.

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An industrial Fault Diagnosis System based on Bayesian Networks

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**Index Terms**

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**Keywords**

Machine Learning, Artificial Intelligence, Bayesian networks, fault diagnosis, data acquisition, DC motor