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Bearing Fault Diagnosis Based on Deep Belief Network

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Abstract

It is important to judge whether the bearing is faulty and the possible fault location based on the acceleration of the bearing. However, the acceleration of the bearing is affected by noise, and it is difficult to rely on observation to find the law. This problem can be solved by using wavelet packet decomposition and deep belief network. In this paper, we use wavelet packet decomposition for noise reduction, and extract features from the noise-reduced data, and then use the deep belief network for training. The experimental results show its effectiveness.

Keywords: Deep belief network, fault diagnosis, wavelet packet decomposition, feature extraction

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1 Introduction

2 Delief Belief Network

3 Experiments

4 Conclusions

References