Politecnico di Torino

SmartData@PoliTO

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SmartTalk: Covivio

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Degrade Estimation with unlabeled production data

ABSTRACT

A Predictive Maintenance strategy for a complex machine requires a sophisticated and non-trivial analytical stage to provide accurate and trusted predictions. Manufacturing industries are not only interested in identifying a failure in advance, but they also want to have continuous monitoring of machinery's conditions, estimating its remaining useful life (RUL). In this SmartTalk, we present a methodology to estimate the degradation of an industrial machinery over time by analyzing its vibrational measurements collected during manufacturing processes. In particular, assuming that we have measurements covering an entire life cycle of the machinery, the aim is to learn, through Machine Learning algorithms, its degradation trend. The learned trend will then be used to infer the remaining production life for machines that have similar characteristics and perform similar production cycles. Preliminary experiments of this methodology have been tested in a real use-case and the results seem to be promising

SmartTalks Season 2