**FACULTY
OF INFORMATION
TECHNOLOGY
CTU IN PRAGUE**

ASSIGNMENT OF MASTER'S THESIS

Title:	Application of Artificial Intelligence Techniques in Predictive Maintenance
Student:	Bc. Jan Lukány
Supervisor:	Ing. Tomáš Borovička
Study Programme:	Informatics
Study Branch:	Knowledge Engineering
Department:	Department of Applied Mathematics
Validity:	Until the end of summer semester 2020/21

Instructions

There exist multiple approaches to predictive maintenance (PdM) problems each having specific data requirements and use cases. Nowadays, these problems can be solved using artificial intelligence (AI) techniques. The goals of this thesis are to:
- Review common approaches to PdM, including fault detection, fault prediction, remaining useful life prediction and anomaly detection, and their evaluation metrics.
- Review several most used AI algorithms for each of the PdM approaches from both deep learning and classical machine learning.
- Experimentally compare the evaluation metrics on several publicly available datasets using the reviewed algorithms. Focus on the practical application.

References

Will be provided by the supervisor.

Ing. Karel Klouda, Ph.D.
Head of Department

doc. RNDr. Ing. Marcel Jiřina, Ph.D.
Dean

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