



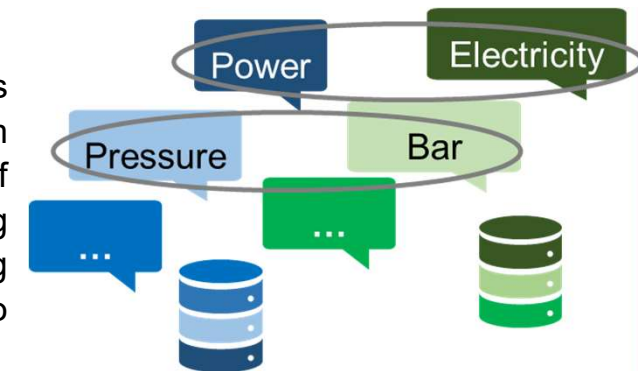
Method for classification and mapping of diverse fault messages using NLP (BA,SA,MA)

Lehrstuhl für Automatisierung und Informationssysteme
Technische Universität München
Prof. Dr.-Ing. Birgit Vogel-Heuser



Task Description:

The advancement of modern automated production systems comes along with Big Data. One example for such is data from Alarm management Systems (AMS) assuring safe operation of the production system. However, the manual analysis of such big data sets is beyond human capabilities. Furthermore, the wording differs from company to company and even from machine to machine.



To ensure the generalizability of data analysis algorithms it is necessary to collect and classify commonly used words or text snippets which is the first task of this thesis. Besides, the derived cluster shall be mapped to a model that is used as additional information for machine learning algorithms. The developed method and its implementation are evaluated on an industrial use case.

Preliminaries:

- Interest in NLP, machine learning and recent developments of automation
- Knowledge of a higher programming language (preferably Python)
- Experience with PyTorch, Tensorflow or equivalent beneficial
- Independent, motivated way of working



Victoria Hankemeier, M.Sc.
Informationsverarbeitung

Tel.: +49 (0) 89 / 289 16431
E-Mail: victoria.hankemeier@tum.de