Revolutionizing Industry 4.0 with Machine Learning Research: Our offer

FRANKFURT UNIVERSITY OF APPLIED SCIENCES

We use machine learning as a tool to investigate industrial problems such as data analysis, predictive maintenance, and decreased of uptime.

We exploit artificial intelligence in assistance with human expertise from theoretical domain to application.

We use deep neural networks to perform tasks on high end GPUs. That happens together with companies to solve relevant problems and to find unique solutions.

We use life prediction to predict the lifetime of industrial machines and equipment. We detect wear and tear using state of the art deep learning techniques.

We use Time series Analysis to analyze data from IoT sensors for detecting anomalies, behaviours and requested patterns. We also use fourier transform, wavelet transform, shaplets as feature extractors.

We use time series generation to synthesize data set from a smaller dataset by simulating equipment models. Hereford we use state of the art deep learning generative models to generate synthetic data.

We can rely on mechanical or electrical engineering who understand the domain and can apply practical work (such as e.g. programming an actuator).

Our projects last 3 to 12 months and depend on the kind of cooperation with the company partners

Applying Machine Learning Techniques for Industry 4.0 Solutions: Our Approach

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Identify an industrial problem suitable for machine learning together with our company partners

Free viability study to find out if we can solve the problem with machine learning

Development of a suitable and scalable use casein relation to a business model together with our company partners

Evaluation of the results and determining the next steps

Application for research funding and turning the project into a prototype

Combination of research with transfer to do what is best for the company partners