Student job, master thesis, bachelor thesis, project thesis

AI-based fault classification for eddy current measurements

As part of eddy current measurements for quality control of pipes, material defects are currently detected and classified by testing experts. This inspection process requires expertise and a high level of concentration from the inspectors. With the help of AI, employees are now to be supported in their troubleshooting.

Your tasks

The aim of the work is to develop a methodology for the automated determination of error classes in eddy current analyses. This

is to be done with the help of artificial intelligence. The work is divided into four work packages:
(1) The first work package is intended to familiarise the reader with the basic principles required for understanding.

(2) In the second work package, studies focussing on "Error classification using AI for time series data (for eddy current measurements)" are to be identified.

(3) Subsequently, in the third work package, a methodology is to be developed with which the AI-based error classification of eddy current measurements can be carried out.

(4) In the fourth work package, the methodology is to be implemented using eddy current measurement data and then validated. For the implementation, 2-3 supervised learning approaches will be used.

Your profile

You are studying one of the following subjects:

- Mechanical engineering
- Industrial engineering
- Computer science
- Robotics
- Production and Logistics
- Production Engineering
- Electrical Engineering

You are interested in data analysis and artificial intelligence.

You also have knowledge of Python and some experience with data science.

Good written and spoken German and English skills are desirable.

We offer

- Appropriate remuneration for a student job
- independent work
- flexible working hours
- well-equipped workplaces
- home office by arrangement
- realisation of experiments
- possibly long-term co-operation

Bitte sende deine aussagekräftige Bewerbung in einer einzigen PDF-Datei an jobs@iph-hannover.de.

Die Bewerbung muss Anschreiben, Lebenslauf sowie Prüfungsleistungen des Studiums / Zeugnisse enthalten.
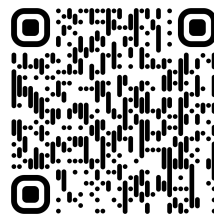
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