Artificial Intelligence based Image Recognition (Instance Segmentation) for Condition Monitoring

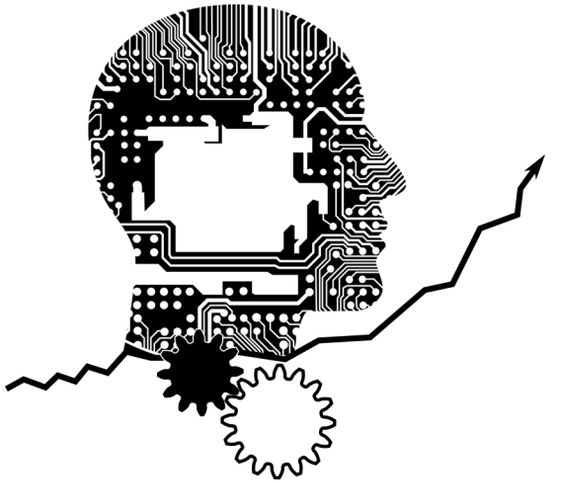
Interdisciplinary Project

TU Munich
Mechanical Engineering

Institute of Machine Elements
Gear Research Centre (FZG)
Prof. Dr.-Ing. K. Stahl
www.fzg.mw.tum.de

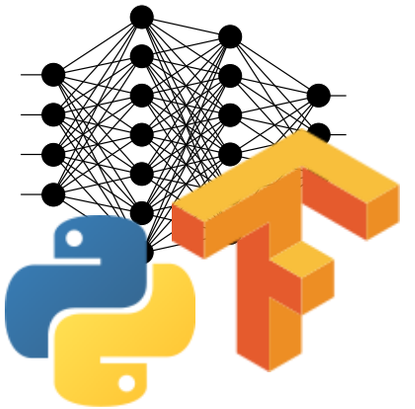
Motivation:

At the Gear Research Centre we are developing an innovative artificial intelligence based condition monitoring system with gear damage detection. One challenge is to evaluate gear damage in gear flank images automatically. With the benefit of having a large test facility, we are able to run as many tests as necessary to get the data needed.



Your task:

With a large database of gear flank images provided, the goal is to develop, implement and train advanced neural networks that are able to detect the degree of various types of gear damage. Therefore, as part of a team you will work in the field of instance segmentation to develop a modularized ML application.



Your profile:

- Highly interested in artificial intelligence with advanced knowledge of neural networks
- Understanding of image recognition (instance segmentation)
- Coding Skills (e.q. Python, TensorFlow)
- Highly motivated and responsible
- Fluent in English or German

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