Master Thesis Proposal

Information Fusion from Multiple Fault Classification Algorithms for Fault Classification

Machine learning and data-driven classification have become more and more important thanks to the access to large amount of training data. There is no fault classification algorithm that is optimal for all situations. Therefore, often different fault classification algorithms, for example Random Forests, model-based methods, Support Vector Machines etc., are optimized for classifying different sets of faults. One problem is then to conclude about the system state based on the different fault classifier outputs.

This master thesis project is conducted in collaboration with Volvo Cars and the objective is to investigate how to combine information from different fault classifiers to compute, and rank, the likely fault hypotheses. The master thesis project will use (and collect) real data from an engine available in the vehicular systems lab.

In this master thesis project, we are looking for students who are interested in machine learning, Bayesian probability theory and automotive applications using real data from one of the engines in our engine lab.

If you are interested or have questions, please feel free to mail me: daniel.jung@liu.se

or come by my office in the vehicular systems corridor (B-building behind Café Java).