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## At Volkswagen with a master thesis on "Development of a machine learning method for Energy load profile analysis" at the Wolfsburg site

Against the backdrop of CO2 emissions, a worldwide shortage of raw materials and the development of energy prices in recent years, the issue of energy efficiency is becoming increasingly important in the production of goods in an industrial environment. Within the scope of a master thesis, an analysis of the energy load profiles recorded in individual working groups in car body construction is to be carried out. For this purpose, a method is to be developed with the aid of learning methods, which separates aggregated energy load profiles from each other, in order to subsequently determine the energy requirement for different process steps. The consumption values determined are then to be documented in a database.

### Your tasks are:

- Literature research on the topic of energy load profile analysis and learning methods
- Optimization and evaluation of different learning processes based on their forecast quality
- Development of a methodology for the breakdown of energy load profiles
- Creation of a database for standardized process steps
- Design of a user interface for automated use of the tool
- Documentation of the results

### We offer you:

- a thesis in an industrial environment
- Research on innovative topics in the body shop

### You have the following qualifications:

- Student of Computer Science or comparable fields of study
- English language skills advantageous
- In-depth knowledge in the application of tensor flow etc.
- Confident handling of MS-Office (especially Word, PowerPoint and Excel)
- Self-reliant working style, distinct ability to work in a team, high comprehension skills

Desired duration: 6 months

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