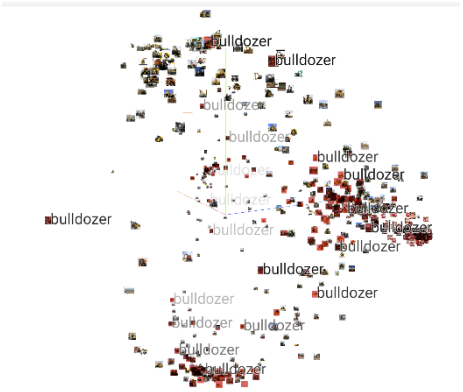
Karlsruher Institut für Technologie (KIT)
Institut für Fahrzeugsystemtechnik
Teilinstitut Mobile Arbeitsmaschinen

Prof. Dr.-Ing. Marcus Geimer

Bachelor- / Masterarbeit

Initiative application for Master or Bachelor Thesis:

Artificial Intelligence, Simulation Environment, Mobile Machines



One significant trend in the field of mobile machines is electronified. Consequently, a series of technologies in the fields of robotics can be transferred to mobile machines. Nowadays, most of the functions are much more complicated than before, and thus highly accurate simulation models are needed. Moreover, the value of measured data is also not entirely used to enhance mobile working vehicles performance. Thus, your goal is to implement AI methods to improve the performance of electronified mobile machines, or you build up the simulation environment to validate the concept or augment the data.

Currently, we have many master and bachelor theses to be allocated. Based on your background and research interest, you can select one topic in the following fields: machine learning, deep learning, sensor fusion, control algorithm, potential analysis, reinforcement learning, control strategy, simulation, fluiddynamics, and finite element method.

Please do not hesitate to write to us. The materials you should send us are your transcript, CV, and your motivation letter. Concretely, in your motivation letter you should introduce yourself, for example:

- What is your strength?
- What have you done during your internship or project?
- What is the most exciting topic for you?
- When are you going to begin your thesis?

After you send us your application, we are pleased to invite you to come to our office and discuss the particular topic. During our first meeting, the motivation and research question of your thesis will be determined.

Prerequisite:

You are expected that you have already got intermediate knowledge about at least one of the following software: Matlab, Simulink, Python, C++, Tensorflow, Keras, ROS, CATIA, CREO, OpenCV. Furthermore, mathematics is one of your favorite subjects. Last but not least, you are confident in your English writing skill.

Duration:

4-6 months

Contact person:

M. Sc. Yusheng Xiang

mailto:yusheng.xiang@partner.kit.edu

Ausgabedatum: 01.10.2019