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Master thesis

Deep Learning based Data Segmentation: Analysis of Domain Adaptation Techniques

Topic and goal of the thesis

Training artificial neural networks requires large amounts of data. It is therefore desirable to be able to incorporate data from multiple publicly available data sources in the training process. This thesis analyzes methods that mitigate the negative effects on the networks' performance that arise from differences in the data sets. The methods shall be applied to and evaluated on data sets for image segmentation of road scenes.

Tasks

- Literature research on domain adaptation techniques for training neural networks that segment images
- Implementation of the proposed techniques in python
- Training of neural networks for image segmentation
- Evaluation of proposed techniques

Requirements

- Good English or German language skills
- Reliability, commitment and enjoyment of working independently
- Experience with python
- Experience with Machine Learning is an advantage (not a must)

Note: The thesis may be written in German or English

Bereich

Automated Driving

Contact



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Start date

earliest possible date

Prior knowledge

Python