

Student Thesis

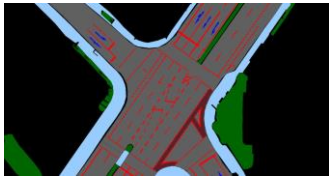


Master Thesis

Deep-Learning-Based Semi-Automated Creation of HD Maps from Aerial Imagery

Topic and Goals of the Thesis

High-precision maps are necessary for the development, safety validation and operation of automated vehicles. However, the creation of such maps currently requires a lot of manual effort or highly complex and expensive measurement systems.



A significant simplification in the manual creation of maps from aerial imagery would be the automatic detection of relevant components such as road markings, symbols, lane borders, etc. Current methods from the field of machine learning are particularly suitable for this purpose. Within the scope of this thesis a system is to be designed, developed and evaluated, which supports a user in the creation of maps.

Tasks

- Literature research on approaches on object detection in aerial imagery
- Design and implementation of a deep-learning-based solution
- Evaluation of the benefit for the creation of maps

Your Profile

- Good English and/or German language skills
- Reliability, commitment and enjoyment of working independently
- Basic machine learning and/or computer vision experience
- Advanced programming experience in Python and/or Matlab

Department

Vehicle Intelligence & Automated Driving

Contact



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Entry Date

ASAP

Prior Knowledge

Programming
Basic Computer Vision