

Student Thesis



Bachelor/Master Thesis

Deep Learning Based Tracking of Road Users in Drone Imagery

Topic and Goals of the Thesis

For the development and safety validation of automated vehicles, huge trajectory datasets of road users are necessary. One solution to create those datasets is the use of drone imagery of traffic on e.g. highways or urban intersections.



From the recorded videos, every road user must be detected, classified and tracked robustly to create highly accurate trajectories. State-of-the-art solutions for visual tracking employ deep learning algorithms and optimization algorithms for this task. The goal of this thesis is to design, implement and evaluate a suitable solution based on current trends in research.

Tasks

- Literature research on state-of-the-art visual tracking algorithms
- Implementation of one or more algorithms on existing data
- Evaluation of the implementations regarding tracking quality and processing time with an existing solution

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
Computer Vision