



Bachelor/Master Thesis

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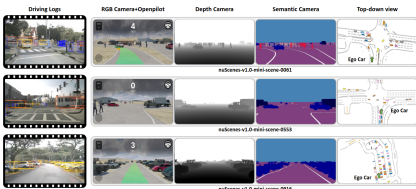






Figure 1: Map implementation into a simulation environment (Li, Quanyi, et al. : ScenarioNet: Open-Source Platform for Large-Scale Traffic Scenario Simulation and Modeling, 2023.).

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Map Generation for Simulation Environments

Description

- The Intelligent Vehicles (IV)-Lab is looking for a Bachelor/Master student to support research in the field of autonomous driving.
- In autonomous driving there is constant gap between real world and simulation. There are many maps available for real world, but only a few for simulation environments and especially not specified for real world scenarios. The goal of this thesis is to close this gap by developing a map generation pipeline that can implement recent real-world maps into a simulation environment with random static environment.

Your Project

- Review current methods on map generation and map implementation into simulation environments.
- Design a map generation pipeline that can implement recent real-world maps from BEV into a simulation environment with random static environment.
- Examine how reasonable the generated map derivative is compared to the real world map.

Your Profile

- Willingness to learn and interest in the topic of autonomous driving
- Ability to work independently, conscientiously, and accurately
- Previous experience with Python is required

What we offer

- Access to high-end GPU cluster for training
- Access to workstation with GPU for development
- Supervision and close cooperation with PhD candidate
- Depending on your results: possibility to publish your work at a conference

Does this appeal to you? Then reach out to us via mail and send a short introduction, your current grade report, and a CV with a photo.