

Master Thesis

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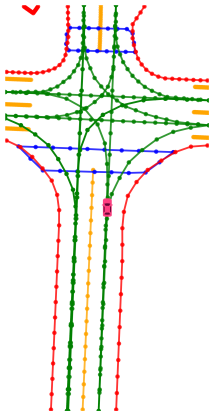


Figure 1: Vectorized online map from cameras.

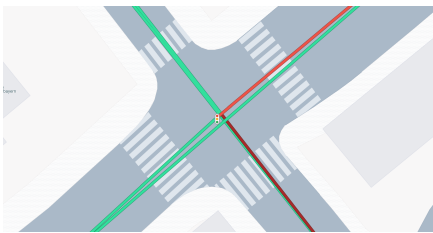





Figure 2: Navigation map.

Contact

-  E-Bau, Dachauer Str. 98b
80335 München
-  089 1265-3458
-  intelligent-vehicles@hm.edu

Fusion of Onboard Sensor based Map with Navigation Map

Description

- The Intelligent Vehicles (IV)-Lab is looking for a **Master Student (m/f/d)** to support research in the field of autonomous driving starting in the coming winter semester.
- Further information you can find here: <https://iv.ee.hm.edu/>

Online Map Fusion for autonomous driving

- Learn about existing semantic mapping technologies e.g., SLAM based, segmentation based, detection based.
- Learn how to extract and leverage information from navigation map such as OpenStreetMap or Google Map.
- **Goal:** Develop an online map leveraging existing navigation map and onboard sensors (Camera, Lidar, GPS) for autonomous driving.
- **Extension:** Possibility of deploying your solution on our test vehicle AVA.
- **Research Question:** Which map representation and sensor modalities are best for fusing navigation map?

Your Profile

- Willingness to learn and interest in the topic of perception and mapping
- Ability to work independently, conscientiously, and accurately
- Previous experience with Python/C++ is required
- Previous experiences with Machine Learning, Bash, and git are a plus

What we offer

- Gaining experiences in the field of autonomous driving and deep learning
- Access to high-end GPU cluster for training
- Access to workstation with GPU for development
- Supervision and close cooperation with PhD candidate

Does this appeal to you? Are you interested in the field of autonomous driving? Then reach out to us via mail and send a short introduction, your current grade report, and a CV with a photo.