

HiWi Semantic Mapping for Autonomous Vehicles

Autonomous vehicles rely on high-precision maps for many of their core functions. These maps provide geometric information for localization and extensive semantic details. Lane guidance and traffic regulations are crucial for the planning module to make informed routing decisions in combination with dynamic events. The perception, tracking, and prediction modules use these maps for object verification, guided tracking, and predicting the behavior of different traffic participants.



Our research vehicle, EDGAR (Excellent Driving GARching), already utilizes such maps in various scenarios. Your task will be to expand our existing map set. We are looking for a student assistant (HiWi) to support us in semantic mapping.

At our institute, we have developed a pipeline and tools to assist in the mapping process. Your responsibility will be to map predefined areas in Munich and beyond. *You will be an integral part of the EDGAR team, contributing directly to the project's success.*

Your Tasks:

- Creation of Lanelet2 maps using JOSM and VectorMapBuilder (no prior experience required)
- Semantic annotation of road networks

What You Should Bring:

- A careful and reliable working approach
- Basic experience with Git  / GitLab 

What We Offer:

- Be part of a team of PhD candidates and students bringing autonomous driving to the real world
- Compensation according to *Tarifgemeinschaft deutscher Länder (TdL)*
- Flexible working hours
- Team events
- Access to computers and workspace at the institute
- Opportunity to write your thesis on automated mapping

Join us and contribute to shaping the future of autonomous driving!



mailto:dominik.kulmer@tum.de

