IVL Intelligent Vehicles Lab

HM Hochschule München University of Applied Sciences

Thesis

Release date: October 2024
Starting date: 01.10.2023

Figure 1: Agile-X Scout Mini with LiDAR and CU. [global.agilex.ai]

Bachelor Thesis - Autoware Alternative

Description

- The Intelligent Vehicles (IV)-Lab is looking for a **Bachelor Thesis Student (m/f/d)** to support research in the field of autonomous driving.
- Available architectures for autonomous vehicles like Autoware tend to be bloated and not suited for our purposes. We would like to implement a streamlined version of Autoware specifically for our research robots (see Figure 1) with a possible deployment in our research vehicle in mind.

Your Project

- Familiarize yourself with Autoware and ROS2
- Determine which parts are essential and reasonable for our research robots
- Implement a ROS2-based communication framework that can run on the AgileX robots (Nvidia Jetson Orin)
- **Goal**: A framework for connecting sensors, actuators, and control algorithms in a modular and efficient way running on an Nvidia Jetson Orin together with an AgileX robot

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
- Previous experiences with Linux, Bash, and git are a plus

What we offer

- Gaining first experiences in one of the most promising technical fields of modern times
- Supervision and close cooperation with a PhD candidate in the corresponding field
- Optional extension to an SHK-position with flat-rate payment

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.

Contact

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