

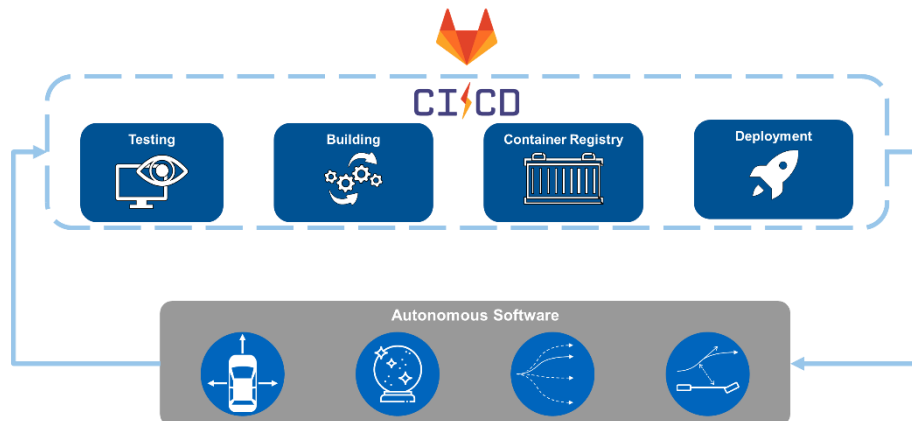
IDP

Gitlab CI/CD Development for Autonomous Driving Software

Situation:

Autonomous driving software is at the forefront of automotive innovation, but ensuring its safety is paramount. A CI/CD pipeline is essential, enabling continuous testing and deployment, making it a critical component in the development process. This shortens the feedback loop, enhances reliability, and is crucial in ensuring the safe and effective functioning of autonomous vehicles.

Project:



In this project, the existing GitLab CI/CD pipeline will be further developed for autonomous software. The objective is to automate the testing of the software in multiple steps within the pipeline. Docker images will be built for each module of the autonomous software stack. Ultimately, these Docker images will be deployed on a real research vehicle.

The following work steps comprise the research project:

- Familiarization with the existing CI/CD Pipeline
- Implementation of automatically executed unit tests, integration tests and simulation tests
- Further development of modular Docker container building processes
- Preparation for deployment on a real vehicle

Requirements:

- Experience with GitLab CI/CD
- Experience with Docker
- Ideally knowledge of Python or C++

Contact:

If you are interested in this project or any other project related to autonomous driving, please send your resume and transcript to:

Gemb Kaljavesi | gemb.kaljavesi@tum.de | 089 289 10493

Institute of Automotive Technology | Prof. Dr. Markus Lienkamp