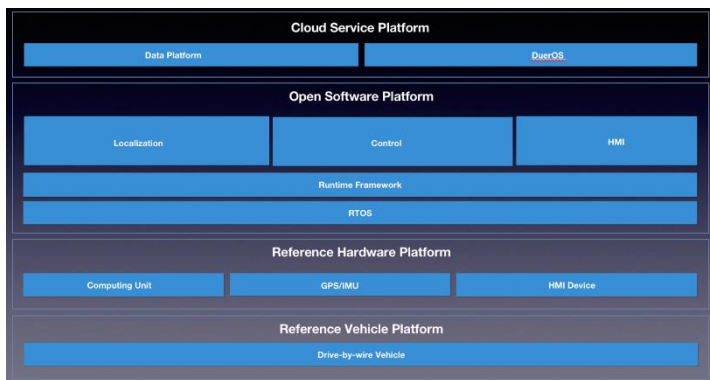


## Master Thesis/ Masterarbeit



Source: Apollo Github



Source: FTG

### Implementation of APOLLO in Matlab and vehicle simulation

Automated driving is a megatrend in automotive engineering aiming at introduction of driverless cars in the next years is a major goal. The open source software platform **Apollo** <https://apollo.auto/> provides the software architecture to create vehicle prototype demonstrator.

The project deals with implementing the open source C-code of Apollo in Matlab/Simulink and then build up a simulation model with IPG CarMaker.

An final application would be to demonstrate an already developed lane change maneuver in the vehicle simulation.

#### Contents:

- Training on IPG CarMaker (vehicle simulation) and Apollo.
- Programming of the Apollo Code in Matlab/Simulink
- Implementation of the Simulink code in the vehicle simulation
- Demonstration of an automated lane change
- Documentation

#### Requirements:

- Basis knowledge of C++
- Some experience in Matlab/Simulink
- Basic knowledge in control theory

**Duration:** 6 month  
**Start:** Anytime  
**Work place:** FTG

An expense allowance is offered for the completion of the master's thesis.

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