

1 Introduction

During this phase of the project, we encountered significant challenges in simulator development due to a misunderstanding of the "status2" intention, which led us down a number of unproductive paths. Additionally, we faced numerous bugs stemming from issues with the official code and the computer environment. As a result, the lane-keeping function is still under development.

2 Planned activities

We focus on resolving technical issues with simulator configuration and ROS integration, ensuring all modules function smoothly. We also design the path tracking module for accurate path following in various environments, a key component for autonomous driving. Once this is done, we design the state machine to enable smart decision-making and vehicle control based on different driving modes.

3 Status of planned activities

The lane-keeping function has been effective as a single module, but it still faces some issues when integrated into the ROS simulator. Our team has been actively working to resolve various bugs in the simulator. Details are on the forum.

4 General status of the project

The project progress has not yet recovered. We have tried multiple environments and development approaches, but the results have been less than satisfactory.

5 Upcoming activities

We plan to refer to past open-source code and explore different technology stacks. Meanwhile, we will retain some team members to directly develop on the hardware. We believe these measures will help us overcome the current challenges and get the project back on track.

