

IGVC Milestone 1

Requirements Document

Scope

- ▶ The rule of the competition:
 - ▶ Navigate through the course, following the lane
 - ▶ Avoid the obstacle
 - ▶ Reach the waypoint
 - ▶ Maintain the speed between 1-5 mph

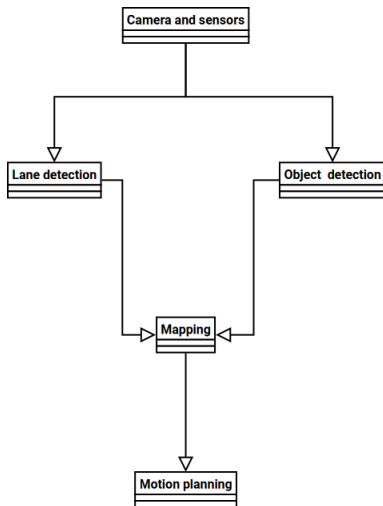
Design Document

Modules

- ▶ Camera and sensors.
- ▶ Images processing:
 - ▶ Lane detection
 - ▶ Obstacle detection
- ▶ Mapping
- ▶ Motion planning

Design Document

- ▶ List the subsystems of the robot and demonstrate the data flow.



Testing Document

- ▶ List the test cases for each subsystem.
 - ▶ Independent testing
 - ▶ System testing / Integration testing.

Establish best practices

- ▶ The team chose C++ and Python for the project's software.
- ▶ The team was able to chose tools for enforcing the code standard.

Examine the legacy code

- ▶ Read and examine the code from last year project.
- ▶ Unable to test it due to hardware condition.

Examine options for motion planning

- ▶ The team was able to learn more about motion planning.
- ▶ Motion planning algorithm will be chosen after implementing and testing other functions.

Milestone 2

- ▶ Test the legacy code
 - ▶ Find the replacement parts for the robot to make it functional and test the code from last year project.
- ▶ Implement and test obstacle and/or lane detection
 - ▶ Read the document on ZED camera and write ROS node(s) for detection functions.

Question?