Milestone 1

Requirements Document

Scope

The rule of the competition:
This specification establishes the functional, performance, interface and verification requirements for the Florida Institute of Technology Capstone Program, IGVC Robot. The IGVC Robot shall have the capabilities to qualify and compete in the 2020 Intelligent Ground Vehicle Competition Auto-Nav Challenge.

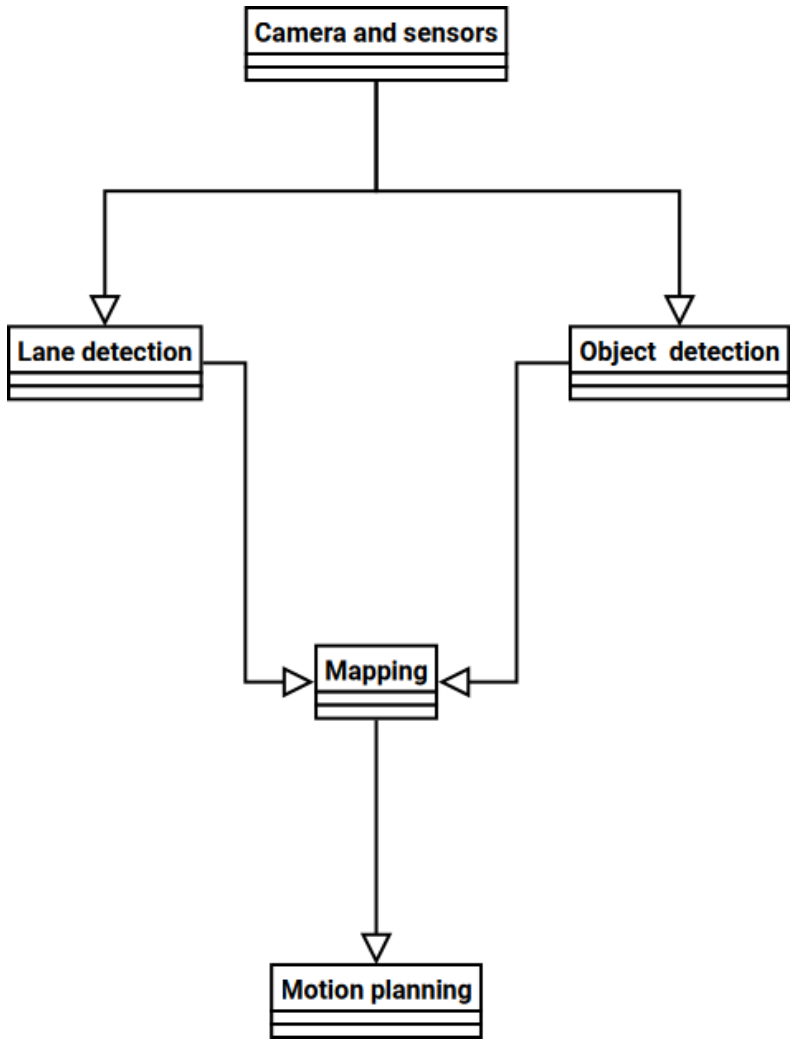
Design Document

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?