**Autonomous Navigation Project**

This project implements an autonomous navigation system for a RobotCar using Webots simulation environment. The system utilizes various sensors including LIDAR, GPS, and Camera to perceive the environment and make informed navigation decisions.

**Features**

- Lane following using camera vision

- Obstacle detection using LIDAR

- GPS-based positioning

- Camera recognition and segmentation

- Real-time display of camera feed

**Requirements**

- Webots R2023b or later

- Python 3.7+

- OpenCV

- NumPy

- simpleaudio

**Installation**

1. **Install Webots:**

Download and install the latest version of Webots from **https://cyberbotics.com**.

2. **Set Up Python Environment:**

Make sure you have Python 3.7 or later installed. You can create a virtual environment for the project:

**Running the Simulation**

1. **Open Webots:** Launch Webots and open the project containing the RobotCar controller.
2. **Set Up World:** Make sure the Webots world is set up with the required elements (road network, traffic signs, etc.). The RobotCar should be placed in the world with its controller set to robot\_recognition.py.
3. **Configure Controller:** Ensure the robot\_recognition.py file is correctly placed in the Webots

