



Self-Driving Vehicle Project: Week 9

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Zhuohuan Li (GR)



Anthony Siu (UG)



Sandeep Alankar (UG)

Who we are



Adas Bankauskas (UG)



Abia Mallick (UG)

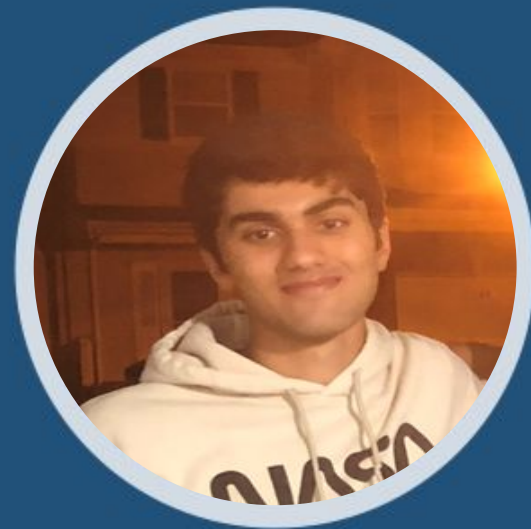


Malav Majmudar (UG)

Who we are



Lohith Bodipati (HS)



Aayush Agnihotri (HS)

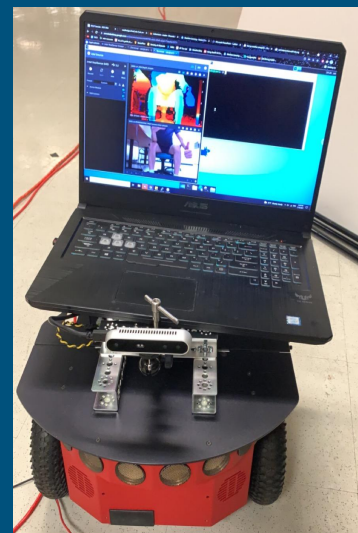
Who we are

Project Objectives

- ❖ Build a fully functional self-driving vehicle
- ❖ Incorporation of ROS control into existing car software
- ❖ Use of AI/machine learning algorithms for self-driving behavior
- ❖ Use Gazebo to map out simulations
- ❖ Building the physical model at WINLAB and testing its autonomy in a real environment

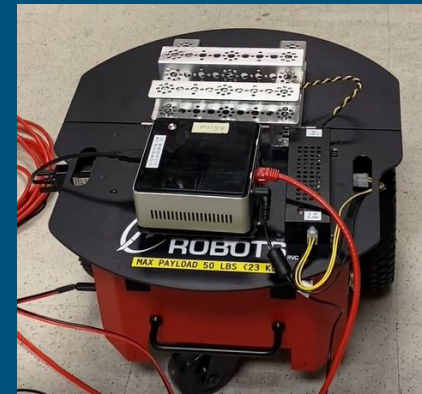
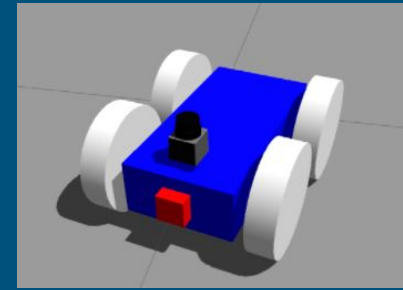
Current Progress

- ❖ Switched to ROSARIA, now using ROS nodes to connect to and wirelessly drive the robot
- ❖ Configured ROS nodes such that training data consisting of both imaging and robot commands can be recorded simultaneously
- ❖ Began collecting data through the rosbag node
- ❖ Properly explored the gazebo simulation, expanding on models and the world



Future Plans

- ❖ Implement self-driving algorithms on smaller mobile robots
 - Use RealSense camera feed and corresponding steering inputs when navigating around WINLAB as training data
- ❖ Train the robot using one of the GPU nodes in the office, specifically “grid”
- ❖ Explore ROS scripts for steering and properly configure ROSARIA onto smaller robots
- ❖ Finish up the final presentation, poster, and website:
 - <https://sa14544.wixsite.com/self-driving-vehicle>



Any Questions?