Self-Driving Vehicle Project: Week 7

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Zhuohuan Li (GR)

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Who we are

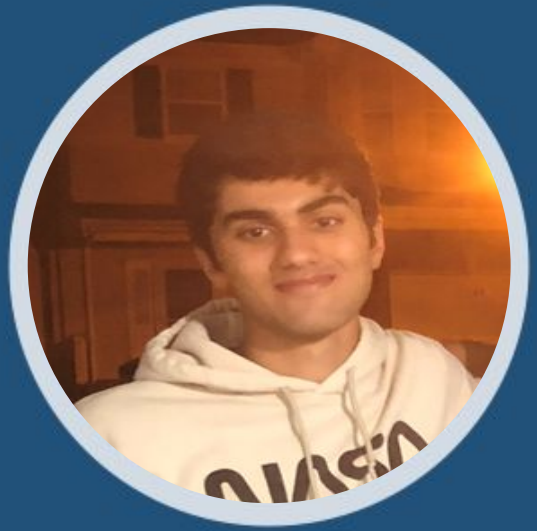
Adas Bankauskas (UG)

Abia Mallick (UG)

Malav Majmudar (UG)

Who we are

Lohith Bodipati (HS)



Aayush Agnihotri (HS)

Who we are

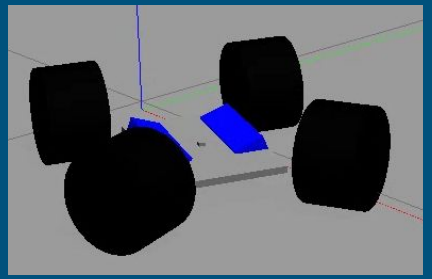
Project Objectives

- 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

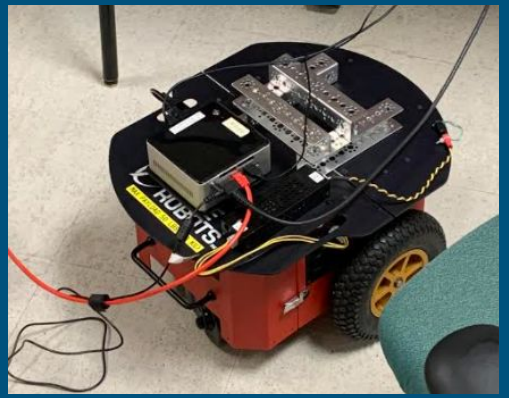
Current Progress

- Accessed four RealSense cameras positioned around city intersection
  - Created 3D image from each perspective and started to experiment with combining images by creating and transforming individual point clouds
- Connected to Pioneer 3-DX robot remotely from laptops
  - Installed RosAria and used catkin workspace to build and run the RosAria node

Future Plans



- Combine RealSense camera feeds and extract position of any object in camera view based on relative position to all cameras
- Try to properly steer and control Pioneer robot remotely
- Attach and configure RealSense camera to Pioneer 3-DX for more accurate steering
- After Teensy Board is installed on the smaller chassis, we can experiment and test with its odometry in the Smart City space



Any Questions?