Intersection
Simulation

About Us

Mark Stanik
Rutgers University
Major: Computer Engineering and Computer Science
Class: 2022

Allen Chang
Rutgers University
Major: Computer Engineering and Computer Science
Class: 2022

Patrick Yubeaton
Rutgers University
Major: Electrical and Computer Engineering and Economics
Class: 2022

Project Overview

- Develop a smart city intersection simulation

    - 120th and Broadway

    - 120th and Amsterdam

- Simulation is a testbed for self-driving research

- Emulate human driving via traffic simulator
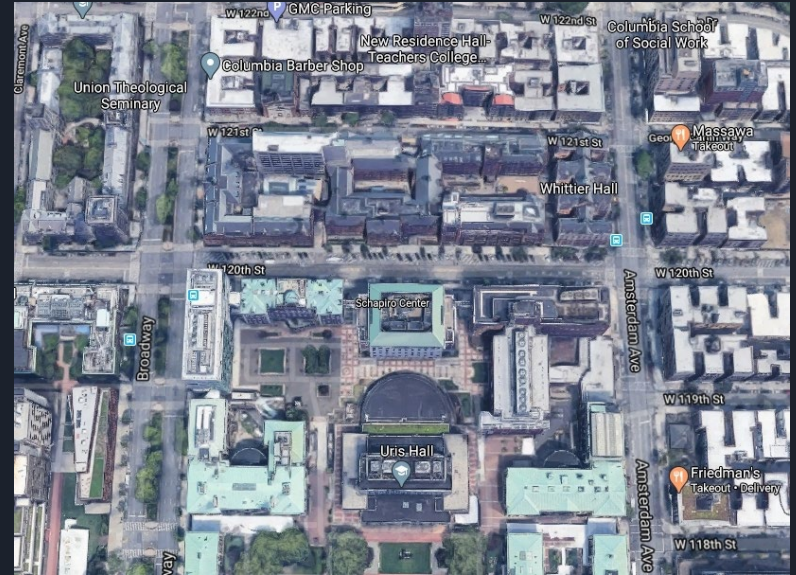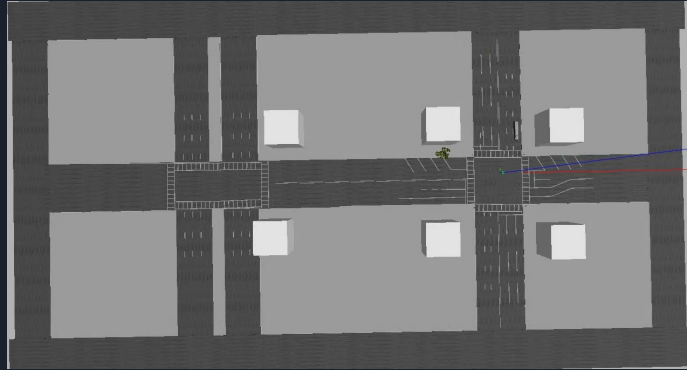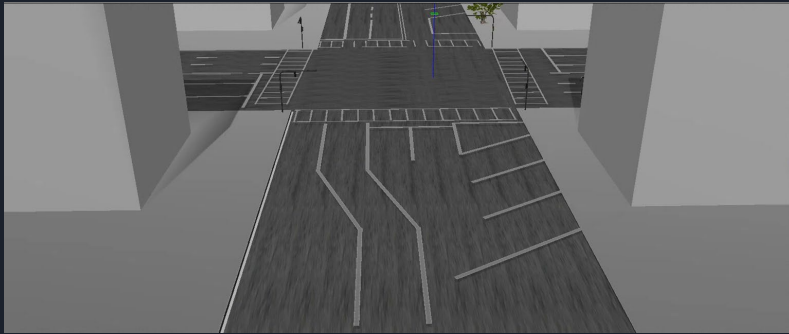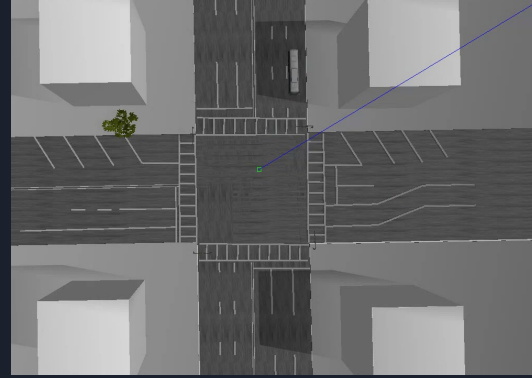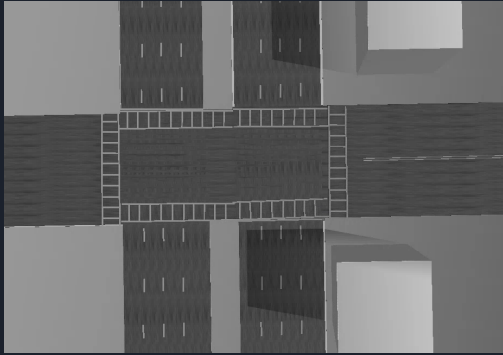
Methodology & Equipment

- SUMO - Simulation of Urban MObility

- Gazebo - Robotics Simulator

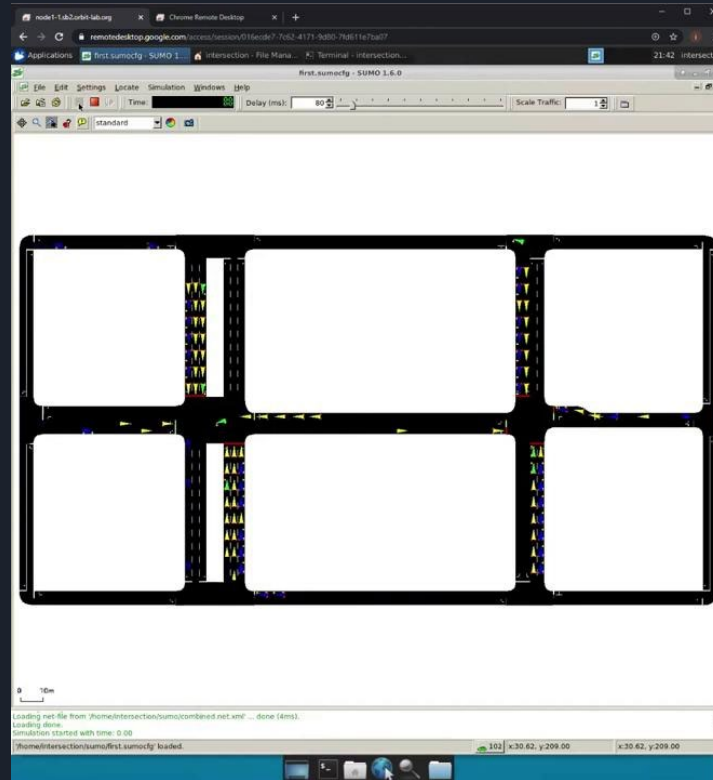- ROS - Robot Operating System (Melodic)

Physical Model Intersection

Gazebo Model Intersection

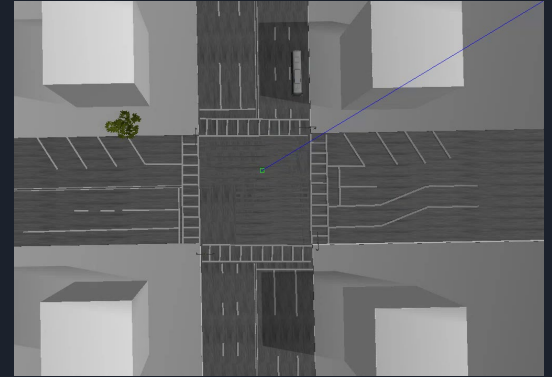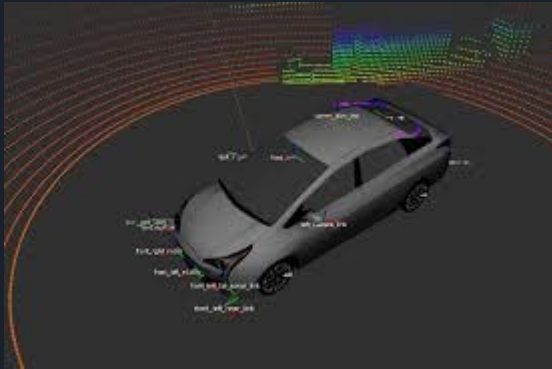# Sumo Model Intersection + Traffic Model

Results

Next Steps

- Incorporate the Self-Driving Car's vehicle into our simulated world

- Incorporate street parking and pedestrians into traffic model

- Set up working Gazebo traffic lights

Acknowledgements

- Jenny Shane

- Ivan Seskar

- Mario Garzón

- https://hal.inria.fr/hal-01872095/document

- https://bitbucket.org/marioney/hybrid_simulation/src/master

- https://github.com/osrf/car_demo