MICHIGAN STATE
UNIVERSITY

Alpha Presentation
Automotive Software Integration In Virtual 3D

The Capstone Experience

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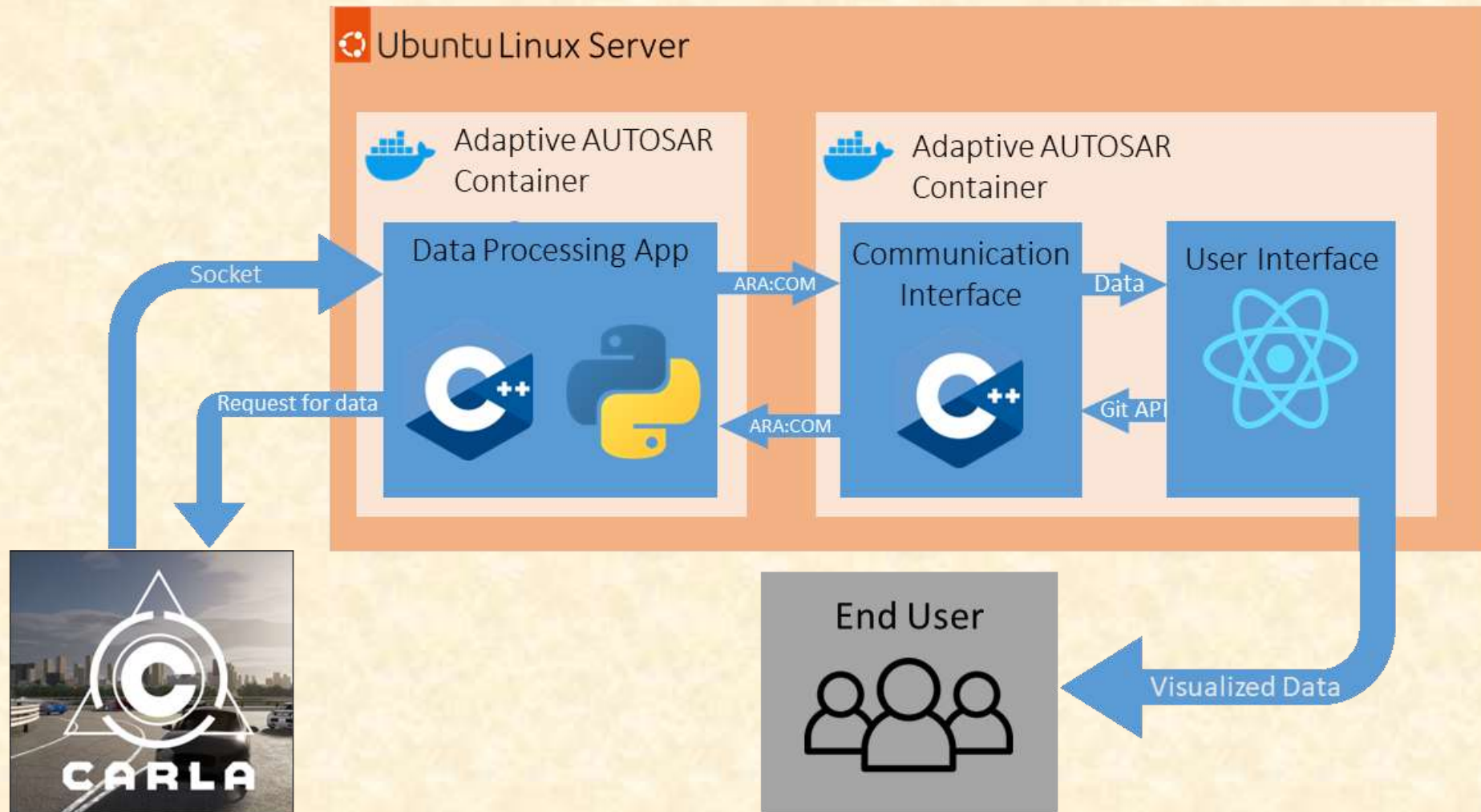
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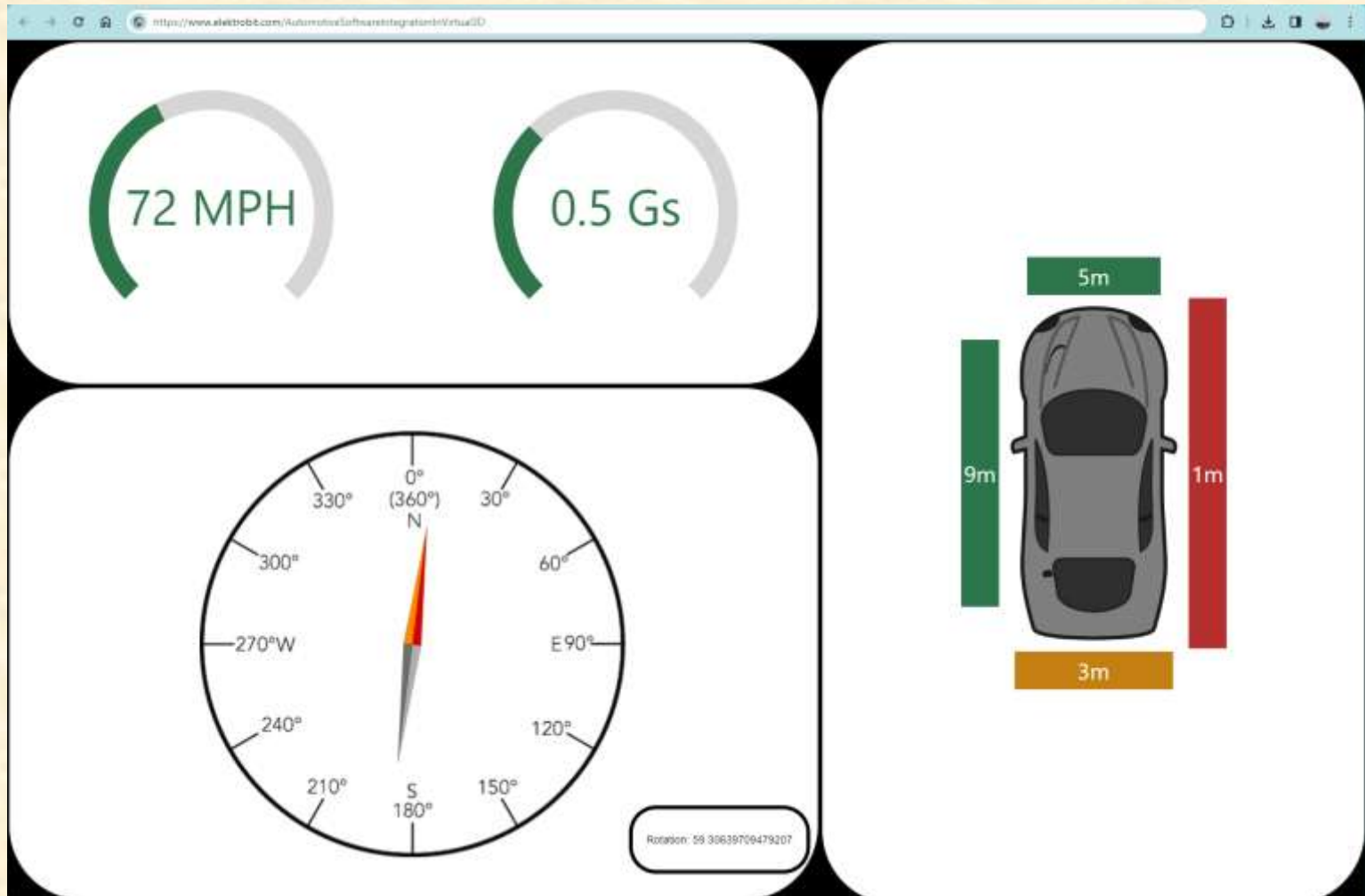
Spring 2024

Project Overview

- Proof of concept for HPC Dev-kit
  - Simple, secure, low-latency communication
- Pull data from CARLA sensors to the frontend
  - Data passes through two HPC Dev-kit containers
- Target audience is other engineers
  - Backend logic is far more important than the UI
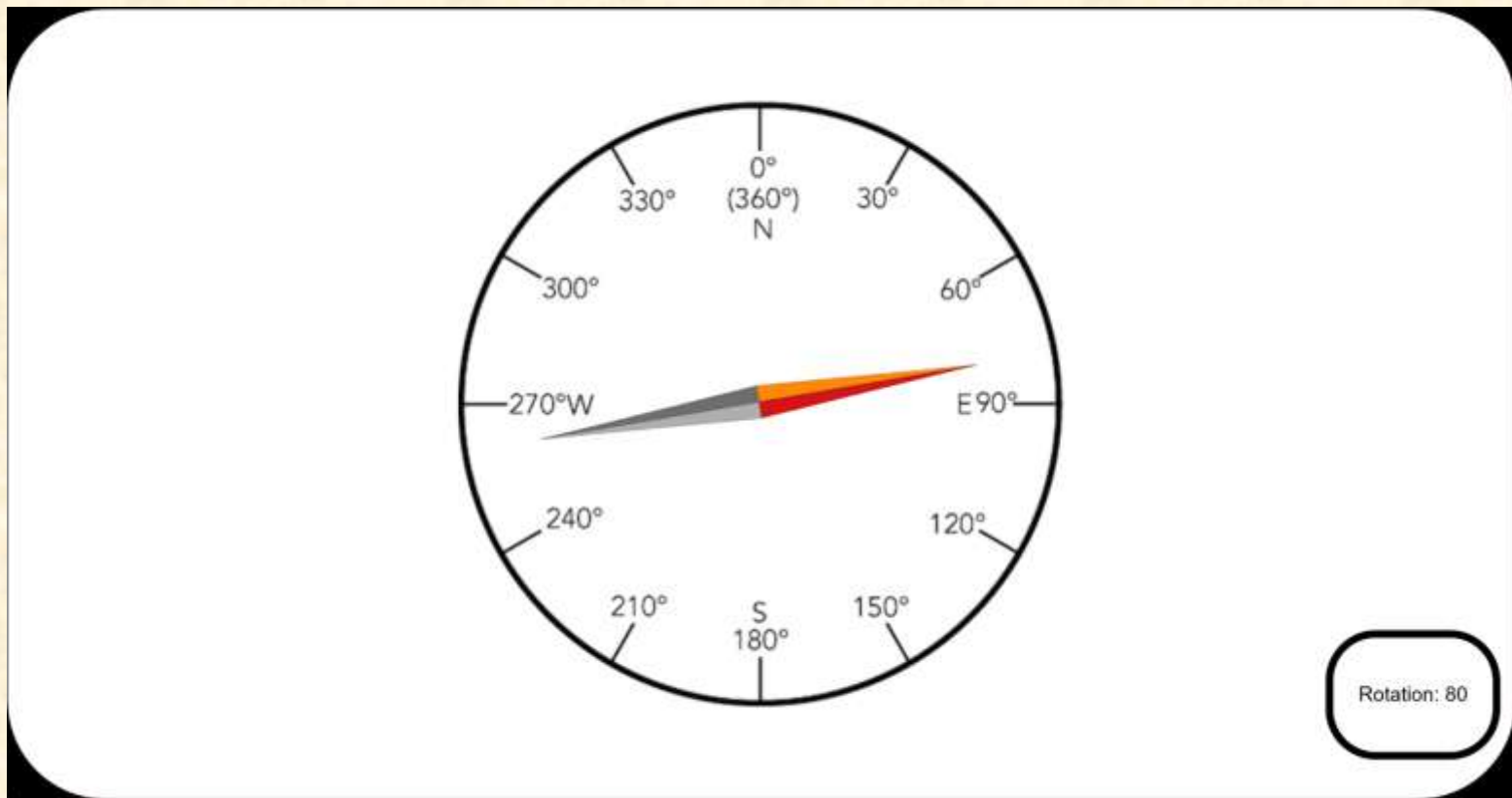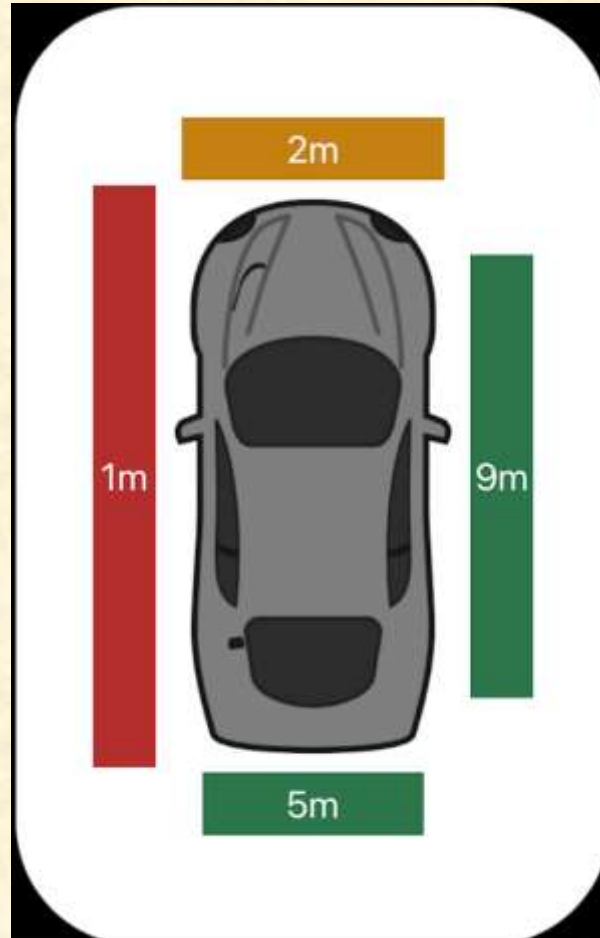
System Architecture

Main Dashboard

Speedometer/Accelerometer

GPS Sensor

Obstacle Detection Sensor

What's left to do?

- CARLA data needs to be cleaned and usable
- Lower response time for the UI to refresh properly
- * Average of 3 radar and 3 GPS sensor
  - If one is malfunctioning, stop using the data and report failure
- * Implement more sensors
  - Dropdown menu for each of the three components

Questions?

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