Viraj Patel

901-343-4722 | virajp95@gmail.com | github.com/vrp56

Education

Mississippi State University — Starkville, MS

Bachelor of Science in Computer Science — *August 2015 - May 2019*

- GPA: 3.72

Master of Science in Computer Science — *August 2019 - August 2023*

- GPA: 4.0

Work Experience

Graduate Student Researcher — January 2020 – Present

Center for Advanced Vehicular Systems — *Mississippi State University*

- ARC Project
  - Developing Autonomous Vehicle Simulation in Unreal Engine 4
  - Designing Experiments for New Research Ideas
  - Generating Datasets from Collected Data
- SimBRS II Project
  - Data Visualization in Virtual and Augmented Reality
  - Visualizations of Digital Twins
- BAA Visualization Project
  - 3D Modeling of Vehicles
  - Visualization of Vehicles in Augmented Reality
  - UI/UX Design for Augmented Reality

Technical Skills

Languages: C/C++, Python
Web Development: PHP, HTML, SQL Database Integration
Robotics/Autonomy: Robot Operating System (ROS), Navigation and Sensing, State Machine Logic
Game Development: Unity 3D, Unreal Engine, Augmented and Virtual Reality

Personal Projects

ArUco Pose Estimation | *ROS Kinetic, Python*

- Using ROS to gather 6DOF pose estimation from a USB camera. These pose estimations were to be used to autonomously operate a robot for the NASA Robotic Mining Team at Mississippi State University for the NASA LUNABOTICS competition. The pose estimations gathered here were to be used in conjunction with a SLAM program to help localize the robot's position.
- The code for this project is not available to share.

mARble Meltdown | *Unity 3D* — https://github.com/vrp56-School-Projects/Game2

- A mobile Augmented Reality game designed for Android Devices where you compete with another player on the same device. The goal of the game is to get your marbles as close to the center of the target as possible.
- A more in depth description can be found on the GitHub page above.

The Reservoir Bank Heist | *Unity 3D* — https://github.com/vrp56/The-Reservoir-Bank-Heist

- A Virtual Reality game designed for the Oculus Quest 2. This is a project demonstrating a simple World in Miniature (WIM) navigation method.
- A more in depth description can be found on the GitHub page above.