VICTORIA HONG

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EDUCATION

Rutgers University, New Brunswick, NJ   Expected Graduation: May 2023
B.S. in Computer Engineering & Minor in Computer Science | 3.5
- **Awards:** Dean's List (Spring 2020)
- **Relevant Coursework**: MATLAB, Digital Logic Design, Engineering Mechanics, Engineering Economics, Scientific Research

PROJECTS

Optimal Trajectories for Autonomous Human-Following Carts   July 2020 - Present
- Conduct research on autonomous systems with Dr. Jingang Yi to develop a framework that produces optimal trajectories for contactless carts to achieve safe shopping in crowded environments
- Utilize RGB cameras for human tracking and activity recognition and Adaptive Monte Carlo Localization (AMCL) to estimate robot poses and calculate optimal trajectories
- Experiment with ROS/Gazebo simulations using modified Turtlebot3 platforms and in-lab experiments with an omni-directional robot to prove the accuracy and robustness of technology

Anomaly Detection Algorithm for Autonomous Driving Vehicles   March 2020 – May 2020
- Researched with Dr. Dario Pompili to create an algorithm to detect anomalous data in autonomous vehicles
- Utilized Gaussian Mixture Model (GMM) anomaly detection method to sort and classify data in specific categories
- Tested resultant data against Multi-Class LSTM Autoencoder and Multi-task Learning Model and concluded GMM produced the most accurate result that consistently found and sorted all anomalies with test and real data

EXPERIENCE

CAMDEN COUNTY TECHNICAL SCHOOL, Sicklerville, NJ   June 2019 – Present
Robotics Mentor
- Mentor three high school robotics teams and teach a total of 100 students about programming and machining
- Spearhead and design the curriculum for annual Girl Scout workshops and STEAM camps for 120+ students

RUTGERS UNIVERSITY Busch Student Center, Piscataway, NJ   September 2019 – March 2020
Operations Assistant
- Assisted an average of 230 customers a day and organized events by setting up tables, chairs and sound and video equipment

PHO VOORHEES, Voorhees, NJ   October 2017 – March 2020
Waitress
- Served 190+ customers daily and managed point-of-sales payment systems for seamless transactions
- Proposed and implemented an expansion of the restaurant beverage line that led to a 10% increase in annual sales
- Trained 40% of new employees about expectations, safety procedures, food and drink preparations, and POS system

LEADERSHIP AND HONORS

- **Fellow, America Needs You** (August 2020 – Present): Selected as one of 75 first-generation college students in New Jersey to serve in a 2-year career development and leadership training program
- **LSAMP Scholar, Louis Stokes Alliance for Minority Participation Program** (July 2020 – Present): Selected as one of the 30 students to participate in a research and professional development program at Rutgers University

SKILLS AND INTERESTS

- **Programming & Development:** Python, HTML/CSS, Javascript
- **Software**: MATLAB, AutoCAD Inventor, ROS, PyCharm, Jupyter, Gazebo, Overleaf, Blender
- **Machining**: Plasma Cutter, Laser Cutter, CNC Mill, Mill Machine, Lathe Machine
- **Certification**: Introduction to Computer Science (Harvard University)
- **Interests**: Cooking, Crime Shows, Thrifting, Couponing, Graphic Design