JASON CHEN

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Online Portfolio: https://chen2156.github.io

Education

Northwestern University — Evanston, IL
Master of Science in Robotics — December 2021

Purdue University — West Lafayette, IN
Bachelor of Science in Computer Engineering — May 2020

Technical Skills

Programming: Python, MATLAB, Java, C, R, Verilog, C++, Bash, Linux, MySQL, PHP
Software/Tools: Arduino, QGIS, OpenGL, Git, ispLever, ESP32 Microcontroller, Robot Operating System (ROS), Azure, JIRA, SLAM, Gazebo, Rviz

Work Experience

Symbotic — ***Wilmington, MA***
Machine Learning Intern — June 2021 – September 2021

- Collected data for Bot Health Monitor model
- Used company tools to determine and verify data was coming from healthy robots
- Uploaded data to blob containers on Azure
- Documented workflow using JIRA tickets
- Discussed with team on whether unhealthy data collected is related to bot health
- Assisted team on some data analysis related to the Pusher and Puller System of the robot

Purdue University — ***West Lafayette, IN***
Undergraduate Teaching Assistant — January 2020 – August 2020

- Assisted students troubleshoot problems during lab office hours
- Attended weekly meetings with other teaching assistants and professors
- Assisted Graduate Teaching Assistant in grading students' homework
- Worked on ECE 20875, Python for Data Science
- Continued to work job remotely during Covid-19 Pandemic

Electrical and Computer Engineering (ECE) Shop — January 2020 – August 2020

- Managed inventory of ECE Shop to help students locate spare electronic parts for lab courses
- Handed out lab kits to students taking various lab based ECE courses
- Fixed broken lab equipment
- Made sure shop was kept in a clean and organized fashion
- Worked on the development of website for ECE shop remotely during Covid-19 Pandemic

Research Experience

Georgia Institute of Technology ***Atlanta, GA***
Civic Data Science REU, Undergraduate Researcher May 2019 – July 2019

- Conducted NSF funded research on fire truck delays at traffic light intersection
- Analyzed fire truck location data to determine behavior at intersection using QGIS
- Implemented filters to remove uninteresting points using Python
- Created analysis-based visualizations using leaflet.js: https://cav.ce.gatech.edu/

Florida International University ***Miami, FL***
NSFDOD REU, Undergraduate Researcher May 2018 – August 2018

- Conducted NSF funded research on routing protocols for ad-hoc networks for swarms of drones
- Compared routing protocols based on how well drones routed data from point to point using MATLAB

Academic Projects

Robotic Arm-Arduino

- Semester long project for Senior Design
- Controlled a Robotic Claw using Arduino IDE
- Used servo motors to move and hold robotic arm's joints
- Controlled motor positioning using PWM signal generated from esp32 WROOM chip
- Attempted to mimic human arm and hand movement wirelessly via Bluetooth

Pong-Embedded C

- Final project for Embedded Systems Design Class
- Programmed Pong on an LCD display using Embedded C
- Controlled paddles using joysticks wired on breadboard

Steganography-Python

- Final Project for Software Engineering Class
- Embedded colored image inside an image carrier and then extracted embedded image out without affecting its visual appearance
- Used Qt Designer, a GUI designer, to implement program in a GUI application