Alice Huston

github.com/ahuston-0 (848) 210-1300
linkedin.com/in/ahuston0 aliceghuston@gmail.com

Education

Stevens Institute of Technology | Hoboken, NJ — Aug. 2018 – expected May 2022
B.S. of Computer Science, Minor in Literature — *GPA: 3.34/4.0*

Technical Skills

Programming Languages: C/C++, Python, Java, Bash, Javascript, ARM Assembly, R
OS: Arch Linux, Debian, Raspberry Pi OS, Ubuntu Server, Unraid, Windows
Libraries: NumPy, OpenCV, Winsock, PyTorch, scikit-learn, GLFW, Matplotlib
Other Tools: Docker, LaTeX, SQL, AutoCAD, SolidWorks, ROS, OpenGL, Office

Experience

Software Development Intern — Dec. 2020 – Present
Stevens Institute of Technology — *(Remote) Hoboken, NJ*

- Led a team of student interns to develop **Grail**, an **OpenGL**-based graphics API and browser engine
- Ported **C++** networking functionality on **Linux** to **Windows** using **Winsock**
- Added support for **ESRI Shapefiles** to draw and animate maps through rendering engine
- Improved XDL Type system, a custom standard similar to CORBA, to send and receive statically-typed data

IT R&D Project Management Intern — Jun. 2020 – Aug. 2020
USCG Research and Development Center — *(Remote) New London, CT*

- Led meetings with potential vendors for an upcoming project
- Gathered requirements from past projects and potential users
- Collected and processed data to narrow down potential vendors and viable products
- Resolved pre-testing issues with setup and application requirements

Research Intern — Jun. 2019 – Dec. 2019
Maritime Security Center — *Hoboken, NJ*

- Created an image classification system with **OpenCV** to filter out noise and detect buoys in a **ROS/Gazebo** simulation
- Added mapping functionality to plot obstacles onto a 2D map generated by **OctoMap**
- Optimized the image classification and mapping frameworks to improve reliability in navigation

Research Intern — Jul. 2018 – Aug. 2018
Rutgers School of Engineering — *Piscataway, NJ*

- Used piezoelectric materials to create and detect mechanical waves from **Arduino** microcontrollers
- Detected different mediums based on a mechnical wave's travel time

Projects

SwitchForward — Jun. 2020 – Aug. 2020

- A **Python**-based Telegram bot to send stock updates for the Nintendo Switch during a supply shortage
- Used the Gmail API to receive and parse emails from a Google Group tracking Nintendo Switch stock
- Sent updates to a Telegram announcements channel used by **5-10** users

Autonomous Robot — Aug. 2018 – Dec. 2018

- An **Arduino**-based robot designed to navigate through a maze
- Primarily worked on pathplanning and control in a dynamic setting
- Implemented basic error-correction to account for drift during navigation

Cost-effective Road Anomaly Locator — Sep. 2016 – May. 2018

- Designed an affordable methodology for implementing and monitoring a unit to detect potholes and other damaging road anomalies with **65%** accuracy ($p < 0.05$)
- Assembled and tested units for to collect data and demonstrate effectiveness of the unit
- Ran several tests and did statistical analysis on the resulting data