

# Alice Huston

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## Education

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### Stevens Institute of Technology

B.S. of Computer Science, Minor in Literature  
GPA: 3.34/4.0

Aug. 2018 – expected May 2022  
Hoboken, NJ

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## Technical Skills

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**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

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## Experience

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### Software Development Intern

Stevens Institute of Technology

Dec. 2020 – Present  
(Remote) Hoboken, NJ

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

### IT R&D Project Management Intern

USCG Research and Development Center

Jun. 2020 – Aug. 2020  
(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

Maritime Security Center

Jun. 2019 – Dec. 2019  
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

Rutgers School of Engineering

Jul. 2018 – Aug. 2018  
Piscataway, NJ

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

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## Projects

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### 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