

# ANDY MAHONEY

## Computer Science Undergraduate

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## EXPERIENCE

### Paid Undergraduate Researcher

#### Clarkson University

September 2017 – August 2020

- Worked with Dr. Banavar on detecting stress in user voice using voice home assistants (May 2018 - September 2019)
  - Using AWS Lambda, C++, Python, and Matlab
- Take in voice as input, run it through an Algorithm, and give a result all through smart home and IOT devices
- Worked with Dr. Banavar on making an EEG control scheme for robots. (January - May 2018)
  - Using Python, after receiving data from an EEG headset on brainwave activity, translate changes in activity to a control scheme for turtle bots.
- Worked with Dr. Tamon on visualizing Quantum Walks. (September 2017 - January 2018)

### Lab Director of the

#### Clarkson Open Source Institute

#### Clarkson University

August 2017 – Present      Potsdam, NY

- Took meeting minutes
- Gave several in Lightning Talks (5 minute CS presentations)
- Made a webserver for personal website ([www.fortrash.com](http://www.fortrash.com))
- Worked on robotic systems involving Turtle bots
- Imaged and maintained lab machines
- Taught Workshops on Fortran 77, Fortran 18, and popular Esolangs

### Tech Associate

#### Staples

July 2016 – August 2017      Queensbury, NY

- Performed evaluation and intake write ups on incoming PCs
- Fixed broken PCs
- Sold new PCs, routers, printers, and other consumer tech.
- Worked with non-tech skilled people

## PRESIDENT OF ALPHA PHI OMEGA

- Held the e-board positions of President, Webmaster and Historian
- Hosted and participated in several community service events

## EDUCATION

### Bachelor of Science, Computer Science

#### Clarkson University

August 2017 - May 2021

## PROJECTS

### C-String data structure for Fortran 77

- Developed a C-string like data structure for the Fortran 77 language using a subroutine and designing input and output for a character array.

### Personal Website

- Used the Nginx webserver to create a personal website to host information about me, located at [www.fortrash.com](http://www.fortrash.com).

### A Rustacean's Text Editor

- Used the Rust programming language to write a terminal based text editor with macros and text highlighting as well as version control and virtual desktops.

### Dungeon-Redux

- A rogue like survival game written in C#.

## SKILLS

- Programming languages:
  - C#, C++, Python, Rust, Haskell, Fortran 77, Fortran 18, Java, Matlab, Javascript, HTML and CSS, C, Flex and Bison, VHDL, Nim, LaTeX
- Tools:
  - Visual Studios, PuTTY, Unreal Engine 4, Amazon Lumber Yard, AWS, Alexa Skills, Google Actions, VIM, SSH, nginx, git, ROS
- Hardware:
  - Raspberry Pi, Arduino Uno/Due/Mega, ESP8266, Built and repaired computers
- Foreign Languages:
  - French (intermediary)
  - Japanese (Basic/Novice)

## CLARKSON UNIVERSITY TEA CLUB

- Founder and President of Clarkson University Tea Club since 2018