Allen Liu New York Area | Pittsburgh

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EDUCATION

Carnegie Mellon University

B.S. in Computer Science · Minor in Robotics · GPA 3.24 · Expected Graduation: May 2022

Relevant Courses: Parallel and Sequential Data Structures and Algorithms, Principles of Software Construction, Computer Vision, Principles of Imperative Computation, Great Ideas in Theoretical Computer Science

SKILLS

Programming Languages C, SML, Java, Python, Javascript, HTML, CSS

Technologies Git, React.js, Node.js, Arduino, Raspberry Pi, CAD, 3D Printing

PERSONAL PROJECTS

Mirror Mirror - A Raspberry Pi smart mirror built using Javascript (Node.js and React.js). Features basic metrics such as time in addition to weather information (via OpenWeatherMap API) and calendar integration (via Google Calendar API).

3D Printer - Designed in Autodesk Inventor and built from scratch. Controlled by an Arduino microcontroller utilizing open source firmware. Supports a wide range of plastic filaments and utilizes a 20cm x 20cm x 15cm print space.

Time Lapse Camera - Built using a Raspberry Pi Zero and Pi Camera V2 with code written in Python. Captures images at a specified time interval which can be stitched into a time lapse in post. Powered by an external portable battery.

more details and projects located at aliuliu121.github.io

EXPERIENCE

Juni Learning

Computer Science Instructor (remote) · June 2019 - August 2019
- Taught students ages 5-18 to code in Python, HTML/CSS, and Scratch through weekly online classes.
- Taught basic data structures and sorting/search algorithms in the Python curriculum.

EXTRACURRICULARS

Technology Student Association: Animatronics Team

Team Manager and Lead Programmer · September 2014 - June 2017
- (2016 Project) Designed and coded control systems using C for an animatronic hand to mirror the user's hand movements in real time. Won 1st place in 2016 TSA NJ State Competition.
- (2017 Project) Scripted animation and audio routines for a voice-controlled automaton in order to mimic human behavior such as eye gaze and speech. Coded voice recognition for the automaton using Python and the CMU Sphinx library. Won 1st place in 2017 NJ TSA State Competition.

CMU Robotics Club

Member · September 2018 - Present

- Worked on several smaller scale personal projects throughout the year.
- Plan to join Quadcopter, a Robotics Club team project, this upcoming semester.

HONORS & AWARDS

Academics AP Scholar with Distinction, Morris Hills Top 20, Four Year Excelsior Award Recipient

Morris Hills Fencing Team Four Year Varsity Starter, 2018 Morris County Champions, 2018 Top 4 Teams in NJ