Shawn Y. Oh

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EXPERIENCE

Western Digital- RAMP Firmware Intern (Incoming) — San Jose, CA
June 2021 - September 2021

EDUCATION

University of California, San Diego — La Jolla, CA
Major GPA: 3.62; Cumulative GPA: 3.54 — Graduating Dec 2021 (Expected)
Bachelor's of Science, Electrical Engineering; Machine Learning Depth

PROJECTS

Function Prediction Neural Network- November 2020 - December 2020
Python, Machine Learning, Statistics, Nonlinear Algebra, Optimization, Jupyter Notebook
- Built neural network from scratch to approximate the values of various nonlinear functions of 3-D data using Python
- Derived complex equations for weights using advanced nonlinear algebra (Levenberg-Marquardt algorithm)
- Implemented machine learning heuristics with regularizers to train neural net weights

VLRScrape Engine- June 2020 - July 2020
Python, Webscraping, Clustering, Statistics, Data Analysis
- Used Python webscraping to retrieve regional video game performance statistics from numerous different sites
- Implemented derived statistics algorithms and formatting to cluster large data into easily comprehensible figures
- Incorporated dynamic settings that allow for easy custom graphic creation using scraped data

Garage IoT Hub- June 2020 - August 2020
Hardware Design, Embedded Systems, ESP32, Arduino, C++, CAD, Fusion 360, Sensors
- Created device to assist elderly parents with parking in a dark, crowded garage using I2C controlled LEDs & sonars
- Hub also monitors status of garage door and two cars, and relays all information to an MQTT server
- Server fully integrates with home automation system to allow for convenient access to data from mobile phone
- Used CAD and 3D printing to make a modular and non-intrusive enclosure as well as sensor mounts

Healthy Aging Wearable Device- January 2019 - March 2019
Hardware Design, Embedded Systems, Arduino, C++, Python, Bluetooth, IMU, Sensors
- Designed and built a wrist-attached prototype device for senior citizens that monitors and saves heart rate data
- Utilized signal processing, training and validation data sets to model and predict a given user's heartbeat pattern
- Implemented a Bluetooth-interfaced motion sensor (IMU) and OLED to signal alarm for emergency fall detection

SKILLS

Software: Experienced with **Python, MATLAB, Java, C, C++, LTspice, PSpice, SystemVerilog**

Hardware: Experienced with **Embedded Systems, Hardware Design, Machine Learning, CAD, 3D Printing, PCB Design**

ETC: **Quick Learner, Leadership, Passionate about Engineering, Good Communicator**

LEADERSHIP

Mathnasium- Senior Instructor July 2017 - August 2019
- Maintained parts of company's core structure, including curriculum management and customer information
- Edited and taught personalized curriculum for several students based on learning style and current lessons

Cyber Patriot- Cygnus Team Captain March 2017 - June 2018
- Led a computer/network security team that participated in various national competitions, finishing 15th nationally
- Secured various types of operating systems and network configurations to professional standards

Computer Science Club- Secretary August 2017 - June 2018
- Developed and managed numerous large-scale coding projects using C, Java and Python
- Fostered interest for computer science by providing a welcoming and beginner-friendly environment