OLIVER GOCH

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Education

Universal of California, Los Angeles September 2016-June 2020
Electrical Engineering B.S.
Cumulative GPA: 3.2 | Major GPA: 3.7

Relevant Courses: Data Structures, Computer Architecture, Circuit Theory, Digital Design, Computer Logic, Software Construction, Algorithms and Complexity, Principles of Operating Systems, Systems and Signals

Work Experience

UCLA Extension | IT Support Assistant March 2018-June 2018

- Collaborated with other members of the IT department to manage and set up the systems of UCLA Extension
- Researched and utilized a new, open source software to maintain inventory
- Developed scripts in Bash and Python to assist in the sorting and ordering of the massive amounts of equipment

Skills

- C/C++
- Linux/Unix
- Microsoft Suite
- Soldering
- Arduino
- Bash
- Python
- Analog Circuit Design
- Matlab

Projects

Music Box April 2018-May 2018

- Designed a circuit that revolved around a photoresistor and an MP3 decoder
- Based on photoresistor modulating 9V load according to the amount of light present, if light was present music would play
- Prototyped circuit on breadboard before using soldering skills to assemble

Line Following Robot November 2017-December 2017

- Cooperated with a partner to create this robot centered around an Arduino Nano
- Programmed Arduino in C, centering the design around Proportional Integral Derivative control
- Assembled circuit based off a diagram, utilizing 3 IR sensors to send analog signals to the Arduino and employing an emitter follower arrangement with 2 NPN transistors to control two DC motors
- Controlled two DC motors with the Arduino and two NPN transistors and 3 IR sensors in an emitter follower arrangement

BruinNav March 2017

- Programmed a navigational application in C++
- Utilized an A* algorithm as the basis for the program to find the shortest street route
- Employed various data structures in implementation ranging from Binary Search Trees to arrays

Bugs February 2017

- Programmed a simulation of ant colonies competing for resources with grasshoppers in C++
- Created program so that could accept simple code to drive ant colonies
- Employed polymorphism, encapsulation, inheritance, and other techniques in building this project

Leadership

Bruin Racing – Electric Vehicle Electrical Subsystem Lead Present

- Managed a small team in charge of wiring the vehicle, collecting data, and teaching new members
- Utilized skills in battery technology, PCB design, circuit construction, datasheet knowledge, component expertise to complete a variety of tasks to build the electrical systems of the vehicle
- Researched and selected data acquisition technology and sensors to properly collect measurements for vehicle
- Instructed new members in learning techniques of data acquisition and power and wiring

Bruin Racing – Electric Vehicle Social Director September 2017-June 2018

- Organized social events for the Bruin Racing and the Electric Vehicle teams
- Taught new members basics of Electrical Engineering and organizing projects for them to complete