

HOWARD LIU

16708 Moorbrook Ave., Cerritos, CA, 90703; (562)714-6292; howardliu94@gmail.com; github.com/howardl2

Education

University of California, Irvine

Expected June 2017

Computer Science, B.S. | 3.2 GPA

Selected Coursework: Data Structures (C++), Java, Algorithms, AI, Machine Learning, Data Management (MySQL), Computer Networks, Formal Languages and Automata Theory, Computer Vision, Web Applications Development

Skills

Coding: Python, Java, C++, TCL, HTML/CSS, PHP, Javascript, SQL, Matlab

Technologies/Environments: Eclipse, Windows, macOS, Linux, Netbeans, Cygwin, Android Studio, Unity

Experience

Conexant

Irvine, CA

Software Intern

July 2015 - Present

- Implemented the entire GUI and API for PC audio playback using TCL, with framed layouts and tabbed layouts
- Worked with the audio team to organize the audio capture, playback, and headset into one application
- Communicated with employees internationally from Israel, Taiwan, and China to cooperate on solutions
- Created noise cancel tuning capabilities for the distributed headset tuning application using advanced TCL methods
- Progressed the GUI and API of the Android tuning application in order to allow for noise canceling functionality
- Official release of product is currently used by Amazon (Echo), Dell (laptops), and HP (laptops)

SLN Lab

Irvine, CA

Research – Machine Learning; Advisor: Ramesh Jain & Hyungik (Jordan) Oh

January 2017 - Present

- Goal to develop Android application focused on helping Diabetes patients track daily activity using machine learning
- Developed speech recognition capabilities to log food data based on the vocal input using natural language processing
- Used machine learning to train the application to take only the owner's commands by learning the owner's voice

UAV Forge

Irvine, CA

Senior Design Project – Avionics Software

October 2015 - June 2016

- Goal to produce a fully autonomous quadrotor helicopter based on the Darpa UAVForge competition
- Facilitated the development of the quadrotor helicopter autopilot with a team of three members
- Interfaced with I2C hardware using the Arduino Due to process information from the accelerometer

Code to the Future

Irvine, CA

Assistant Instructor

June 2015 – July 2015

- Collaborated with instructor to create a challenging course syllabus that proved to be organized, efficient and effective
- Led 30+ students at a time, teaching coding basics using MIT's Scratch and other resources
- Advanced beginner students to learning introductory object-oriented programming concepts with the Java language

Projects

Exotic Fish Emporium

Spring 2016

- Website designed for hypothetically selling exotic fish as part of a collaborative group project
- Implemented using Java servlets and JavaServer Pages with sessions functionality, such as a shopping cart
- Responsible for applying database management functions using MySQL to store website data
- Create the same working web application using PHP instead of Java servlets and JSPs

Hand-Off Helper

Fall 2016

- Mobile Android application developed using Android Studio for MedApp Jam 2016 at UCI
- Created to help streamline doctor-to-doctor patient handoffs between shifts at hospitals
- Implemented the UI using Google's Firebase as a secure database to store patient and doctor data

Sudoku Solver

Winter 2016

- Developed using Python to solve up to 15-by-15 auto-generated sudoku puzzles in reasonable time
- Performed with DFS using backtracking/pruning, with minimum remaining and least constraining value heuristics

Additional

- **Leadership:** Sigma Nu Fraternity Treasurer, Mentor at Sierra Hall Diversity Training
- **Teamwork:** UCI Dragon Boat Team Steersman, UCI Climbing Team, SLN Lab research group
- **Interests:** Rock Climbing/Bouldering, Paddling, Snorkeling, Hiking, Food Adventures, *Sherlock*, *Game of Thrones*