Eric Syu

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Education:

B.S, Mathematics-Computer Science — Expected Graduation Date: June 2018
UC San Diego

Related Coursework

Introduction to Machine Learning (COGS118a), Fundamentals of Operating Systems (CS120), Theory of Computation (CS105), Design and Analysis of Algorithms and Systems (CS101), Components and Design of Digital Systems(CS140), Advanced Data Structures (CS100).

Technical Proficiency

Javascript, Java, ARM, UNIX, C++, C, Git, Arduino, Raspberry Pi, PHP, HTML/CSS
Personal webpage at http://syueric1102.github.io and robotics blog: http:/syuslab.blogspot.com/

Experience

Cubic Transportation Systems Software Engineering Intern — Summer 2017

- Full stack development of new prototype fare gate and ticketing systems for public transportation. Designed multithreaded programs in Java and Python for data collection and gate functionality, created web dashboard with flask/socket.io and javascript, optimized both hardware and software with attention to user experience.
- Implemented merge functionality for facial recognition database with C# and SQL

UT Dallas Research Internship — Summer 2015

- Designed and implemented code to decode and use I2C signals for NI MyRio and Arduino to build a human control interface for COMEX, a robotic exoskeleton designed to help get paralyzed patients back on their feet.

Siemens Taiwan Summer Internship — Summer 2013

- Programmed smart light switches to switch off during off hours to achieve energy savings.

Awards

Best Use of Artificial Intelligence, UCSD COGS 120 HCI Design — 2017

- Wrote webapp Tonalysis that uses IBM Watson AI emotion analytics and UCSD podcasts to analyze the emotion of professor's lectures to assist students in course selection. Used node.js for backend, angular.js and bootstrap for frontend, embedded python scripts for webscraping and pulling data and mp3 files.
- Won best use of AI out of 50+ teams.

Best Final Project, UCSD COGS 8 Hands On Computing — 2016

- Designed, programmed, and built an Arduino beverage dispensing robot that pumps drinks into cups placed on sensors, won best project out of 20+ individuals.

Projects

Homemade 3D Printer — http://syuslab.blogspot.com/2016/10/homemade-3d-printer.html

- Designed and built a homemade 3D Printer from scratch using recycled motors and a PSU from an old desktop computer; kept costs extremely low by sourcing recycled parts and materials without compromising quality. Used Arduino Mega as control board with C based Marlin firmware.
- Held online workshop and offered printing services for fellow students, created items including laptop stands, models, mechanical part replacements, etc.

Stratos — https://devpost.com/software/stratos

- Designed and prototyped a physical weather visualizer using a Raspberry Pi, water pump, LED lights, and mister to simulate forecasted weather conditions such as clouds, rain, thunder, and sun.
- Built front end to pull weather data using simpleWeather.js and communicate with Raspberry Pi backend apache server with PHP.

ZingSort — http://syueric1102.github.io/ZingSort/

- Javascript web app that compares and visualizes runtimes of popular sorting algorithms graphed with Zing-Charts API