Eric Syu

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Education

B.S, Mathematics-Computer Science
UC San Diego
Relevant 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)

Work Experience

Hive, Software Engineer, Growth — 2018 - Present

- Designed and built distributed ETL pipeline using NodeJS and RabbitMQ to deliver data to both internal and external customers, applying pre and post processing heuristics on millions of bounding boxes weekly
- Built and deployed robust scraping systems for millions of web images, pdfs, audio and video
- Performed data analysis by writing scripts for generating confusion matrices and precision-recall curves

Cubic Transportation Systems Software Engineering Intern — Summer 2017

- Designed and developed a prototype for Slimgate, a minimal footprint gate for public subway ticketing.
- Built 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.

UT Dallas Research Internship — Summer 2015

- Built human control interface for COMEX, a robotic exoskeleton designed to help get paralyzed patients back on their feet, using NI MyRio and Arduino micro-controller.
- Decoded and processed I2C signals.

Siemens Taiwan Summer Internship — Summer 2013

- Programmed smart light switches in a local hospital, achieved 53% energy savings per day.

Awards

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

- Won best use of AI out of 50+ teams.
- Designed webapp Tonalysis that analyzes the emotions of UCSD professors' podcast lectures to assist students in course selection.
- Built with Node.js, Angular.js, Bootstrap, Python for webscraping, and IBM Watson AI emotion analytics API while adhering to RESTful design practices.

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

- Won best individual project out of 20+ people by building a sensor activated Arduino beverage dispensing robot.

Projects

Homemade 3D Printer — Summer 2016

- Designed and built a homemade 3D Printer from scratch using scavenged recycled motors, power supply, and mechanical parts, with firmware written in C and an Arduino Mega as microcontroller.
- Held online workshop and offered printing services for fellow students, created items including laptop stands, models, mechanical part replacements, etc.

Stratos — Fall 2016

- 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.

Technical Proficiency

NodeJS, Python, PostgreSQL, RabbtiMQ, Docker, Mesos, Scylla, Git, UNIX, Arduino, Raspberry Pi
Personal webpage at http://syueric1102.github.io and robotics blog: http:/syuslab.blogspot.com/