ERIC ZHOU

(805) 832-7323
ericfzhou@berkeley.edu
zehric.github.io
github.com/zehric

SKILLS

Node.js, Bash, Python, Lua, Scheme, SQLite, C++, Java, HTML, CSS, Vimscript

EDUCATION

August 2015 - Present
University of California Berkeley
Electrical Engineering and Computer Science
EECS GPA 3.85
Relevant Courses:
CS61B (Data Structures) • **CS61C** * (Machine Structures) • **CS70** (Discrete Mathematics) • **EE16AB** (Designing Information Devices and Systems) • **CS188** * (Artificial Intelligence) • **EE105** (Microelectronic Devices and Circuits) • **CS170** * (Efficient Algorithms and Intractable Problems)
* Currently enrolled

EXPERIENCE

Summer 2016
Software Intern
Rently
I developed a natural language processor, which I call Imperative-Compromise, in Node.js and then created an Amazon Alexa Skill for Rently Keyless devices. The skill works by first getting voice input from the user's Echo to operate a smart home device (ie. "unlock the front door"), which fires an AWS Lambda instance that sends raw English text to my parser. Imperative-Compromise then processes the raw text using an npm module called nlp_compromise, and then sends a command to Rently's servers, which tell the smart device what the user intended. This allows anyone with an Amazon Echo and Rently Keyless devices to control their smart home devices using their voice, from anywhere in the world.

PROJECTS

Text Editor
Course Project
A fully functional text editor in Java. Features include automatic word wrap, open and save, vertical scrolling, changing font size, undo/redo, and more. In order to implement constant time insertion/deletion from anywhere in the document, I created a data structure that combines the constant time access of arrays and insertion/deletion of linked lists.

Bear Maps
Course Project
A web mapping application of the Berkeley area, using data from the OpenStreetMap project. Features route finding that uses the A* algorithm to find the shortest path between two locations on the map. Implements map rastering with a quadtree of images of increasing resolution to support high quality display at any zoom level.

AnimeCal
Personal Project
A Japanese television animation calendar desktop application. It is written in Node.js and uses the Electron framework. Pulls information from the *AniList API*, organizes it based on air time, and displays it to the user with the front-end desktop application. I have plans to also make a mobile app for this.

Imperative-Compromise
Internship Project
A simple application that takes in natural language and outputs machine-readable JSON, created for the purpose of controlling smart home devices with voice. It takes natural language in text format, then parses it into JSON, which can then be forwarded to any generic platform.

SIXT33N
Course Project
Final project of the EE16 course series. It is a mobile robot on 3 wheels (2 drivable) that moves around according to speech input. It uses the MSP430 Launchpad as its guts with some circuitry for driving the motor and sensing through a microphone. Voice recognition is implemented with PCA classification and straight driving with stable eigenvalue placement in negative feedback.