Jared J. Rulison

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http://www.github.com/Rulison

EDUCATION

University of California, Berkeley, Berkeley CA 2013-Present

- **Bachelor of Science, Electrical Engineering and Computer Science** - Expected 2017. GPA: 3.74

Los Altos High School, Los Altos CA 2009-2013

EXPERIENCE

Research Assistant: *UC Berkeley Prof. Stuart Russell Lab, Dept. of Electrical Engineering and Computer Science* October 2015-Present

- Implementing models for background subtraction in video sequences, such as mixture-of-Gaussians, CRF, for Bayesian Logic programming language. Tools used include Python, BLOG.

Software Engineering Intern: *Google, Inc.* May 2015-August 2015

- In natural language processing research team prototyping an interface for talking to website and apps. Created experimental framework for crowd-sourcing datasets of natural language queries. Established baseline measurements on labeled datasets using context-free grammars. Tools used include Python, C++, and internal Google tools.

Research Assistant*: UC Berkeley Prof. Laura Waller Lab, Dept. of Electrical Engineering and Computer Science* August 2013-May 2015

- Assisting in building and programming CellScope, a portable Android-operated microscope. Optimizing image processing techniques using the Android NDK. Tools used include Python, C++, and Arduino.

Problem Grader*: Art of Problem Solving*: August 2013-Feb 2015

- Grading students' solutions for classes ranging from high-school level geometry to Java data structures.

Research Assistant*: Stanford Prof. Miriam Goodman Lab, Dept. of Molecular and Cellular Physiology* June-August 2013

- Wrote programs to streamline experiments for other researchers. Tools used include Arduino, VBScript, Python, and C.

Quality Control Intern*: Intuitive Surgical, Inc in Mountain View* July-August 2012

- Improved machine training simulator by systematic testing of edge cases. Resulted in several reliability improvements to developed piece of software. Used Python.

INDEPENDENT PROJECTS (find most at http://www.github.com/Rulison)

- **Quick Twitch**: A Chrome extension that lists followed channels of a given Twitch username and shows if each is live or not. Worked around Google Javascript security restrictions by deconstructing Twitch Javascript API source code. Currently available in Chrome App Store.
- **Auricle:** iPhone app for ear training. First component is a library of intervals that allows user to hear any interval. Second component is a quiz portion, which plays the interval and asks user for its identity. Tools used include Obj-C, Xcode.
- **RSA Chat**: A Java networked chatroom GUI for demonstrating RSA encryption for education purposes. Demonstrates secure communication between two people and any number of interceptors (spectators).
- **KeyFinder:** A Java GUI that determines the key a song is in when lyrics and chords are pasted in. It does this by decomposing chords into notes and finding the best-fitting scale.
- **Minecraft-Sudo-Plugin:** A Java plugin for Minecraft that allows server administrators to increase granularity of permissions granted to users.

COURSEWORK

- Graduate level: CS280 Computer Vision
- Upper division: CS170 Algorithms, CS184 Computer Graphics, CS186 Database Systems, CS188 Artificial Intelligence, CS189 Machine Learning
- Lower division: CS61A: Structures and Interpretation of Computer Programs, CS61B: Data Structures, CS61C Machine Structures, CS70 Discrete Math and Probability Theory, EE20 Signals and Systems, EE40 Introduction to Microelectronic Circuits

SKILLS

- Languages: Java, Python, C, C++, SQL (Proficient) HTML/CSS/Javascript, iPhone/Obj-C (Familiar with)
- Tools: Apache Spark, Flask, MongoDB, Arduino

LEADERSHIP

External Vice President*: Institute of Electrical and Electronic Engineers* May 2015-Present

- Establishing and maintaining relations with members of industry. Organizing and leading on-campus recruiting events and information sessions.
- Leader of biannual student-run UCB EECS startup fair, the largest student-run career fair with over 40 company representatives and 700 attending students.

Tutor: *CS61B, UC Berkeley* January 2016-Present

- Teaching weekly section of 5-6 students concepts from class.