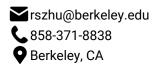
# RICHARD S. ZHU





**Expected Graduation:** May 2023

**GPA:** 3.90

**EDUCATION** University of California, Berkeley

B.A. Computer Science

Relevant Coursework: Structure of Computer Programs, Linear Algebra & Circuits

# **PROJECTS**

# **Investment Portfolio Diversity Visualization Tool (Python)**

- Won the BlackRock API Prize at CalHacks 6.0, the largest collegiate hackathon in the world
- Built a tool that visualizes the diversity of an investment portfolio given any applicable security attribute
- · Leveraged BlackRock's API to compile, sort, and categorize security data from an array of stock symbols
- Integrated MatPlotLib to visualize calculated diversity data and to create a GUI for user portfolio input

## **Bomberman Remastered (Java)**

- Created an improved remake of the classic game Bomberman that runs on modern operating systems
- Devised a completely original "competitive mode", featuring dynamic, real time multiplayer gameplay
- Utilized the Java Swing toolkit to design game menus, handle player controls, and execute game events

## Personal Website (HTML, CSS, JavaScript)

- · Designed and built a personal website from the ground up, utilizing the Bootstrap frontend framework
- Incorporated jQuery for site animations and the Google Fonts API for global typeface compatibility
- Hosted page files remotely on UC Berkeley Open Computing Facility servers, via SSH File Transfer

# Scheme Language Interpreter (Python)

- Constructed an interpreter for the Scheme programming language (a dialect of Lisp)
- · Implemented environments, lexical and dynamic scoping, exceptions, macros, and special forms

## **Smart Typing Practice Program (Python)**

- Developed interactive typing program that calculates typing speed and accuracy with every keystroke
- · Programmed smart autocorrect feature that determines similarity between input and a base word

# **EXPERIENCE**

## California PATH (Partners for Advanced Transportation Technology)

Berkeley, CA

Research Assistant

Oct. 2019 – Present

- Evaluated effectiveness of the Caltrans-proposed "Yellow Alert" intelligent transportation system
- Synced positional, sensor, and behavioral data collected from driving simulation test trials
- Wrote Python scripts to automate trial data analysis, utilizing SciPy, NumPy, and H5Py

#### **Gateways Summer School**

San Diego, CA

Teaching Assistant

Jul. 2018 — Aug. 2018

- Aided Architecture & Engineering teacher with giving lessons and explaining provided examples
- · Guided 30 students on their projects and supervised them during break, learning, and work times

#### ACTIVITIES Car

#### **Catalyst for Success**

San Diego, CA

Treasurer, Senior Technology Mentor

Sep. 2017 - Aug. 2019

- Taught programming and circuitry at the library to over 200 students (Python, Javascript, Arduino)
- Worked with library officials to organize regular weekly workshops and week-long summer camps

#### **AWARDS**

**CalHacks 6.0** — BlackRock API Prize Winner

Oct. 2019 Apr. 2019

Intuit Scholarship Program — Computer Science Scholar
Intuit George A. Hansen Program — Computer Science Scholar
SoCal Developmental Soccer League — Div. 1 Champion

Apr. 2019 Dec. 2018

Languages: Python, Java, SQL, HTML/CSS, JavaScript

Frameworks/Technologies: Git, Unix, Bootstrap, NumPy, MATLAB

**SKILLS**