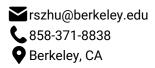
# RICHARD S. ZHU





Expected Graduation: May 2023

**EDUCATION** University of California, Berkeley

**B.A.** Computer Science

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

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

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

Investment Portfolio Diversity Visualization Tool (Python, MatPlotLib, Git) **PROJECTS** 

> Winning Project of the CalHacks 2019 BlackRock API Prize A tool that visualizes the diversity of an investment portfolio given any applicable security attribute

- Leveraged BlackRock 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, Git)**

- An improved remake of the classic video game Bomberman that can be played on modern devices
- Added an all-new local multiplayer mode, featuring dynamic player vs. player gameplay
- Utilized the Java Swing toolkit to design game menus and update graphical textures

## Personal Website (HTML, CSS, JavaScript)

- A personal website created from the ground up, built with the Bootstrap framework
- Hosted page files remotely on UC Berkeley Open Computing Facility servers, via SSH File Transfer

# Scheme Language Interpreter (Python)

- An interpreter for the Scheme programming language (a dialect of Lisp), written in Python
- Implemented environments, lexical and dynamic scoping, exceptions, macros, and special forms

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

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

#### California PATH Lab (Partners for Advanced Transportation Technology) **EXPERIENCE**

Berkeley, CA

Research Assistant

Nov. 2018 - 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 analyze trial datasets, utilizing SciPy, NumPy, and Pandas

### **Gateways Summer School**

San Diego, CA

Teaching Aide

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 Catalyst for Success**

San Diego, CA

Treasurer, Senior Technology Mentor

- 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 2019 - BlackRock API Prize Winner

Oct. 2019

Sep. 2017 - Aug. 2019

Intuit Scholarship Program — Computer Science Scholar Apr. 2019 Intuit George A. Hansen Program — Computer Science Scholar Apr. 2019

**Southern California Developmental Soccer League** — Div. 1 Champion

Dec. 2018