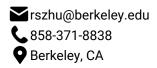
# RICHARD S. ZHU





**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

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

Won the BlackRock API Prize at CalHacks 2019, 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 and added an all-new competitive mode, featuring dynamic, real-time multiplayer gameplay
- Utilized the Java Swing toolkit to design game menus and update graphical textures

### Personal Website (HTML, CSS, JavaScript)

- Designed and built a personal website from the ground up, utilizing the Bootstrap web framework
- 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

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

Nov. 2018 - Present

Berkeley, CA

Research Assistant

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 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

Sep. 2017 - Aug. 2019

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

CalHacks 2019 - BlackRock API Prize Winner **AWARDS** 

Oct. 2019

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

Apr. 2019 Dec. 2018

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