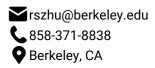
# RICHARD S. ZHU





**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 a completely original "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

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

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
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- 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

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