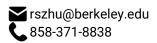
# RICHARD S. ZHU





**Expected Graduation:** May 2023

**EDUCATION** University of California, Berkeley

B.A. Computer Science

Relevant Coursework: Structure of Computer Programs, Information Devices and Systems

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

Frameworks/Technologies: Git, Linux (Ubuntu), Android, NumPy

**PROJECTS** 

## Investment Portfolio Diversity Visualization Tool (Python, MatPlotLib, Git)

- 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
- · Fully recreated core gameplay functionalities, such as player action timers and random power-up drops
- Added an all-new local multiplayer mode, including dynamic player vs. player gameplay
- · Utilized the Java Swing toolkit to design game menus and update graphical textures

# Scheme Language Interpreter (Python, Lisp)

- · An interpreter for the Scheme programming language (a dialect of Lisp), built using Python
- · Implemented environments, lexical and dynamic scoping, exceptions, macros, special forms, and more
- Ensured correct recursive evaluation procedures for call expressions, special forms, and primitives

## **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
- Set up communication of clientside information to game servers for multiplayer "racing" integration

# **Final Grade Calculator (Python)**

- A final grade calculator script, for grading systems where the final exam isn't in a seperate category
- Formulated algorithm to compute a needed exam score based off of a user's desired class grade

#### **EXPERIENCE** Gateways Summer School

**San Diego, CA** *Jul.* 2018 — Aug. 2018

Teaching Aide

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

**Online Clothing Page** 

San Diego, CA

Self Employed

Jan. 2018 — May 2019

- Sold, packaged, and shipped clothing, cosmetics, books, and other items online
- Completed over 85 transactions, totalling a revenue of \$2,237.35

#### **ACTIVITIES** 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

## OTHER Awards

- · CalHacks 2019 BlackRock API Prize
- Intuit George A. Hansen Computer Science Scholar
- Southern California Developmental Soccer League Div. 1 Champion