RICHARD S. ZHU

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EDUCATION

University of California, Berkeley **Expected Graduation:** May 2023
B.A. Computer Science
Relevant Coursework: Structure of Computer Programs, Information Devices and Systems

SKILLS

Languages: Python, Java, SQL, JavaScript, 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
Robust program that visualizes the diversity of an investment portfolio regarding any applicable security attribute
- Integrated BlackRock API to compile, sort, and categorize attribute data for a inputted list of securities
- Used MatPlotLib widgets to visualize calculated diversity data and to create a GUI for selecting stock tickers, their portfolio values, and a specific attribute to examine

Bomberman Remastered (Java, Git)
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 and a reworked keyboard control system
- Utilized the Java Swing toolkit to update graphical textures and construct a menu-based GUI

Smart Typing Practice Program (Python)
Interactive typing program which calculates typing speed and accuracy with every keystroke
- Implemented smart autocorrect feature, which compares typed input to a container of correct words, determines degree of similarity, and determines whether to replace the input
- Set up communication of clientside information to game servers for multiplayer integration

Final Grade Calculator (Python)
Final grade calculator script that takes weighted categories and point totals into consideration
- Constructed algorithm to compute a needed final exam score based off of a user's desired class grade
- Tailored to accomodate grade systems where final is not in a seperate category (Unlike RogerHub's)

ACTIVITIES

UC Berkeley Open Computing Facility (OCF) **Berkeley, CA**
Staff Member *Sep. 2019 — Present*
- Contributed to codebase of ocfweb, the OCF web page, which handles password resets, account creation, dynamic lab usage statistics, and more

Catalyst for Success **San Diego, CA**
Treasurer *Sep. 2017 — Aug. 2019*
- Worked with library officials to run a weekly program teaching programming and circuitry to over 250 local students (Python, Arduino, Javascript)
- Oversaw the organization's finances, raising $317.00 for new supplies

EXPERIENCE

Gateways Summer School **San Diego, CA**
Teaching Aide *Jul. 2018 — Aug. 2018*
- Aided Architecture & Engineering teacher with giving lessons and mentoring students
- 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 through an online webpage, with over 85 transactions totalling a revenue of $2,237.35

OTHER

Awards
- CalHacks 2019 BlackRock API Prize Winner
- Intuit Scholarship Program + George A. Hansen Computer Science Scholar
- Southern California Developmental Soccer League Div. 1 Champion