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 given any security attribute
- Leveraged BlackRock API to compile, sort, and categorize attribute data for a inputted list of securities
- Integrated 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)
- 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 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
- Formulated 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 George A. Hansen Computer Science Scholar
- Southern California Developmental Soccer League Div. 1 Champion