

# RICHARD S. ZHU

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EDUCATION	<b>University of California, Berkeley</b> B.A. Computer Science <i>Relevant Coursework:</i> Structure of Computer Programs, Information Devices and Systems	<b>Expected Graduation:</b> May 2023
SKILLS	<b>Languages:</b> Python, Java, SQL, HTML/CSS <b>Frameworks/Technologies:</b> Git, Linux (Ubuntu), Android, NumPy	
PROJECTS	<b>Investment Portfolio Diversity Visualization Tool (Python, Matplotlib, Git)</b> <ul style="list-style-type: none"><li>• <u><b>Winning Project of the CalHacks 2019 BlackRock API Prize</b></u></li><li>• A tool that visualizes the diversity of an investment portfolio given any applicable security attribute</li><li>• Leveraged BlackRock API to compile, sort, and categorize security data from an array of stock symbols</li><li>• Integrated Matplotlib to visualize calculated diversity data and to create a GUI for user portfolio input</li></ul> <b>Bomberman Remastered (Java, Git)</b> <ul style="list-style-type: none"><li>• An improved remake of the classic video game Bomberman that can be played on modern devices</li><li>• Fully recreated core gameplay functionalities, such as player action timers and random power-up drops</li><li>• Added an all-new local multiplayer mode, including dynamic player vs. player gameplay</li><li>• Utilized the Java Swing toolkit to design game menus and update graphical textures</li></ul> <b>Scheme Language Interpreter (Python, Lisp)</b> <ul style="list-style-type: none"><li>• An interpreter for the Scheme programming language (a dialect of Lisp), built using Python</li><li>• Implemented environments, lexical and dynamic scoping, exceptions, macros, special forms, and more</li><li>• Ensured correct recursive evaluation procedures for call expressions, special forms, and primitives</li></ul> <b>Smart Typing Practice Program (Python)</b> <ul style="list-style-type: none"><li>• An interactive typing program that calculates typing speed and accuracy with every keystroke</li><li>• Built smart autocorrect feature that determines similarity between input and a base word</li><li>• Set up communication of clientside information to game servers for multiplayer "racing" integration</li></ul> <b>Final Grade Calculator (Python)</b> <ul style="list-style-type: none"><li>• A final grade calculator script, for grading systems where the final exam isn't in a separate category</li><li>• Formulated algorithm to compute a needed exam score based off of a user's desired class grade</li></ul>	
EXPERIENCE	<b>Gateways Summer School</b> <i>Teaching Aide</i> <ul style="list-style-type: none"><li>• Aided Architecture &amp; Engineering teacher with giving lessons and explaining provided examples</li><li>• Guided 30 students on their projects and supervised them during break, learning, and work times</li></ul> <b>Online Clothing Page</b> <i>Self Employed</i> <ul style="list-style-type: none"><li>• Sold, packaged, and shipped clothing, cosmetics, books, and other items online</li><li>• Completed over 85 transactions, totalling a revenue of \$2,237.35</li></ul>	<b>San Diego, CA</b> <i>Jul. 2018 – Aug. 2018</i> <b>San Diego, CA</b> <i>Jan. 2018 – May 2019</i>
ACTIVITIES	<b>Catalyst for Success</b> <i>Treasurer, Senior Technology Mentor</i> <ul style="list-style-type: none"><li>• Taught programming and circuitry at the library to over 200 students (Python, Javascript, Arduino)</li><li>• Worked with library officials to organize regular weekly workshops and week-long summer camps</li></ul>	<b>San Diego, CA</b> <i>Sep. 2017 – Aug. 2019</i>
OTHER	<b>Awards</b> <ul style="list-style-type: none"><li>• CalHacks 2019 - BlackRock API Prize</li><li>• Intuit George A. Hansen Computer Science Scholar</li><li>• Southern California Developmental Soccer League Div. 1 Champion</li></ul>	