

# RICHARD S. ZHU

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| EDUCATION  | <b>University of California, Berkeley</b><br>B.A. Computer Science<br><i>Relevant Coursework:</i> Structure of Computer Programs, Linear Algebra & Circuits  | <b>Expected Graduation:</b> May 2023<br><b>GPA:</b> 3.76 |
| PROJECTS   | <b>Investment Portfolio Diversity Visualization Tool (Python)</b> <ul style="list-style-type: none"><li>🏆 <b>Won the BlackRock API Prize at CalHacks 6.0</b>, the largest collegiate hackathon in the world</li><li>Built a tool that visualizes the diversity of an investment portfolio given any applicable security attribute</li><li>Leveraged BlackRock's 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)</b> <ul style="list-style-type: none"><li>Created an improved remake of the classic game Bomberman that runs on modern operating systems</li><li>Devised a completely original "competitive mode", featuring dynamic, real time multiplayer gameplay</li><li>Utilized the Java Swing toolkit to design game menus, handle player controls, and execute game events</li></ul> <b>Personal Website (HTML, CSS, JavaScript)</b> <ul style="list-style-type: none"><li>Designed and built a personal website from the ground up, utilizing the Bootstrap frontend framework</li><li>Incorporated jQuery for site animations and the Google Fonts API for global typeface compatibility</li><li>Hosted page files remotely on UC Berkeley Open Computing Facility servers, via SSH File Transfer</li></ul> <b>Scheme Language Interpreter (Python)</b> <ul style="list-style-type: none"><li>Constructed an interpreter for the Scheme programming language (a dialect of Lisp)</li><li>Implemented environments, lexical and dynamic scoping, exceptions, macros, and special forms</li></ul> <b>Smart Typing Practice Program (Python)</b> <ul style="list-style-type: none"><li>Developed interactive typing program that calculates typing speed and accuracy with every keystroke</li><li>Programmed smart autocorrect feature that determines similarity between input and a base word</li></ul> |  |
| EXPERIENCE | <b>California PATH (Partners for Advanced Transportation Technology)</b><br><i>Research Assistant</i> <ul style="list-style-type: none"><li>Evaluated effectiveness of the Caltrans-proposed "Yellow Alert" intelligent transportation system</li><li>Synced positional, sensor, and behavioral data collected from driving simulation test trials</li><li>Wrote Python scripts to automate trial data analysis, utilizing SciPy, NumPy, and H5Py</li></ul>  | <b>Berkeley, CA</b><br>Nov. 2018 – Present               |
|            | <b>Gateways Summer School</b><br><i>Teaching Assistant</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>San Diego, CA</b><br>Jul. 2018 – Aug. 2018            |
| ACTIVITIES | <b>Catalyst for Success</b><br><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><br>Sep. 2017 – Aug. 2019            |
| AWARDS     | <b>CalHacks 6.0</b> – BlackRock API Prize Winner<br><b>Intuit Scholarship Program</b> – Computer Science Scholar<br><b>Intuit George A. Hansen Program</b> – Computer Science Scholar<br><b>SoCal Developmental Soccer League</b> – Div. 1 Champion  | Oct. 2019<br>Mar. 2019<br>Apr. 2019<br>Dec. 2018         |
| SKILLS     | <b>Languages:</b> Python, Java, SQL, HTML/CSS, JavaScript<br><b>Frameworks/Technologies:</b> Git, Unix, Bootstrap, NumPy, MATLAB   |  |