




# RICHARD S. ZHU

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|-----------------------|--|--|
| EDUCATION             | <b>University of California, Berkeley</b><br>B.A. Computer Science<br><i>Relevant Coursework:</i> Data Structures, Structure of Computer Programs, Linear Algebra & Circuits   | <b>GPA: 3.90</b>   |
| TEACHING/<br>TUTORING | <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><li>• Received the Catalyst Gold Award for outstanding commitment to the club</li></ul> <b>Momentum Physics Tutoring and Outreach</b><br><i>President, Senior Mentor</i> <ul style="list-style-type: none"><li>• Collaborated with high school physics faculty to organize afterschool peer tutoring sessions</li><li>• Expanded club schedule and recruited mentors to accommodate a growing number of physics students</li><li>• Mentored peers one on one with AP Physics C, AP Physics 1-2, and Physics 1-2 Material</li></ul> <b>Gateways Summer School</b><br><i>Teaching Assistant (Paid)</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><i>Aug. 2017 – Jul. 2019</i><br><b>San Diego, CA</b><br><i>Sep. 2017 – Jul. 2019</i><br><b>San Diego, CA</b><br><i>Jul. 2018 – Aug. 2018</i> |
| 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><i>Oct. 2019 – Present</i>  |
| 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> |  |
| AWARDS                | <b>Winner, CalHacks 6.0 BlackRock API Prize</b><br><b>Computer Science Scholar, Intuit Scholarship Program</b><br><b>Computer Science Scholar, Intuit George A. Hansen Program</b><br><b>Champion, SoCal Developmental Soccer League Div. 1</b>  | <i>Oct. 2019</i><br><i>Apr. 2019</i><br><i>Apr. 2019</i><br><i>Dec. 2018</i>   |