




RICHARD S. ZHU

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EDUCATION	University of California, Berkeley B.A. Computer Science <i>Relevant Coursework:</i> Structure of Computer Programs, Linear Algebra & Circuits	Expected Graduation: May 2023
SKILLS	Languages: Python, Java, SQL, HTML/CSS, JavaScript Frameworks/Technologies: Git, Unix, Bootstrap, NumPy, MATLAB	
PROJECTS	Investment Portfolio Diversity Visualization Tool (Python, Matplotlib, Git) <ul style="list-style-type: none">🏆 Won the BlackRock API Prize at CalHacks 2019, the largest collegiate hackathon in the worldBuilt a tool that visualizes the diversity of an investment portfolio given any applicable security attributeLeveraged BlackRock's API to compile, sort, and categorize security data from an array of stock symbolsIntegrated Matplotlib to visualize calculated diversity data and to create a GUI for user portfolio input Bomberman Remastered (Java, Git) <ul style="list-style-type: none">Created a remake of the classic video game Bomberman, with extra features and greater accessibilityAdded an all-new dynamic multiplayer mode that can be played locally on modern operating systemsUtilized the Java Swing toolkit to design game menus and update graphical textures Personal Website (HTML, CSS, JavaScript) <ul style="list-style-type: none">Designed and built a personal website from the ground up, utilizing the Bootstrap web frameworkHosted page files remotely on UC Berkeley Open Computing Facility servers, via SSH File Transfer Scheme Language Interpreter (Python) <ul style="list-style-type: none">Constructed an interpreter for the Scheme programming language (a dialect of Lisp)Implemented environments, lexical and dynamic scoping, exceptions, macros, and special forms Smart Typing Practice Program (Python) <ul style="list-style-type: none">Developed interactive typing program that calculates typing speed and accuracy with every keystrokeProgrammed smart autocorrect feature that determines similarity between input and a base word	
EXPERIENCE	California PATH (Partners for Advanced Transportation Technology) <i>Research Assistant</i>	Berkeley, CA Nov. 2018 – Present
	<ul style="list-style-type: none">Evaluated effectiveness of the Caltrans-proposed "Yellow Alert" intelligent transportation systemSynced positional, sensor, and behavioral data collected from driving simulation test trialsWrote Python scripts to automate trial data analysis, utilizing SciPy, NumPy, and Pandas	
	Gateways Summer School <i>Teaching Aide</i>	San Diego, CA Jul. 2018 – Aug. 2018
	<ul style="list-style-type: none">Aided Architecture & Engineering teacher with giving lessons and explaining provided examplesGuided 30 students on their projects and supervised them during break, learning, and work times	
ACTIVITIES	Catalyst for Success <i>Treasurer, Senior Technology Mentor</i>	San Diego, CA Sep. 2017 – Aug. 2019
	<ul style="list-style-type: none">Taught programming and circuitry at the library to over 200 students (Python, Javascript, Arduino)Worked with library officials to organize regular weekly workshops and week-long summer camps	
AWARDS	CalHacks 2019 – BlackRock API Prize Winner	Oct. 2019
	Intuit Scholarship Program – Computer Science Scholar	Apr. 2019
	Intuit George A. Hansen Program – Computer Science Scholar	Apr. 2019
	Southern California Developmental Soccer League – Div. 1 Champion	Dec. 2018