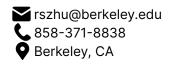
RICHARD S. ZHU \$ rszhu@berkeley.edu \$ 858-371-8838 \$ github.com/richardszh





EDUCATION University of California, Berkeley

Graduation May 2022

B.A. Computer Science

GPA 3.94

Coursework: Data Structures, Computer Architecture, Discrete Math, Probability Theory, Linear Algebra, Circuit Analysis

EXPERIENCE UC Berkeley Dept. of Anthropology

Berkeley, CA

Software Developer

Feb. 2020 — May 2020

- Developed an image auto-processing pipeline in Python, used on 151,173 manuscript scans
- Optimized text legibility by dewarping, deskewing, and binarizing image scans with OpenCV
- Extracted text data from selected documents via OCR, utilizing Google Cloud's Vision API
- Refactored code and wrote documentation to aid future development of the project

UC Berkeley College of Engineering

Berkeley, CA

Course Tutor

May 2020 — Present

- Taught for 12 hours/week as an official course tutor for CS 61A (Intro to Programming)
- Led 6 weekly group tutoring sections, covering topics such as recursion, abstraction, and OOP
- Answered conceptual questions and assisted students with debugging during office hours
- Graded student projects for correctness and proper Python programming style

California PATH (Partners for Advanced Transportation Technology)

Berkeley, CA

Research Assistant

Oct. 2019 — Jan. 2020

- Evaluated potential safety impacts of a Caltrans-proposed freeway emergency alert system
- Synced positional, sensor, and behavioral data collected from driving simulation experiments
- Wrote Python scripts to highlight key points from over 40 unique driver trial data sets

PROJECTS

Investment Portfolio Diversity Visualizer (Python)

- Won the BlackRock API Prize at Cal Hacks 6.0, the largest collegiate hackathon in the world
- Built a tool to help diversify investment portfolios based on a given security data attribute
- Leveraged BlackRock's Aladdin API to compile and categorize security data from stock tickers
- Integrated MatPlotLib to visualize calculated diversity data and create a GUI for portfolio input

Bomberman Remastered (Java)

- Created an improved remake of the game Bomberman that runs on modern operating systems
- Devised a completely original "competitive mode", featuring dynamic multiplayer gameplay
- · Utilized the Java Swing toolkit to design menus, handle controls, and execute game events

Gitlet (Java)

- Constructed a working version control system that replicates the core functionality of Git
- Implemented features such as file staging, commits, branching, merging, tracking status, etc.
- Supported pushing, pulling, and fetching between remote Gitlet repositories

Personal Website (HTML, CSS, JavaScript)

- Designed and built a personal site from scratch, utilizing the Bootstrap front end framework
- Ensured font and layout compatibility for any operating system, display size, or web browser

ACTIVITIES Lab Assistant, CS 61B (Data Structures)

May 2020 — Aug. 2020

Lab Assistant, CS 61A (Intro to Programming) Staff Member, UCB Open Computing Facility

Jan. 2020 — May 2020 Aug. 2019 — Dec. 2019

AWARDS Winner, Cal Hacks 6.0 BlackRock API Prize

Oct. 2019

Winner, Intuit George A. Hansen Computer Science Scholarship

Apr. 2019

Winner, Intuit Academic Scholarship

Apr. 2019

SKILLS

Python, Java, SQL, HTML/CSS, JavaScript, Git, Unix, Bootstrap, NumPy