

RICHARD S. ZHU

✉ rszhu@berkeley.edu
☎ 858-371-8838
📍 Berkeley, CA

 [linkedin.com/in/rszhu](https://www.linkedin.com/in/rszhu)
 github.com/richardszhu
 ocf.io/rszhu

EDUCATION **University of California, Berkeley**

B.A. Computer Science

Graduation May 2022

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)

Jan. 2020 — May 2020

Staff Member, UCB Open Computing Facility

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