

# Brandon Wong

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## EDUCATION

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### University of California, Berkeley

*Bachelor of Arts in Computer Science | GPA: 4.0*

Berkeley, CA

*Expected Spring 2025*

## PROJECTS

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### Gitlet | Java

July 2022

- Mini recreation of Git version control system (13 Git commands); built from scratch using Java and various Data Structures with an emphasis on readable code and design; created additional bash scripts for testing.
- Uses serialization for persistence, utilizes algorithms to optimize commands for specified big O runtimes.

### Build Your Own World | Java

July 2022

- A program that generates 2D playable worlds; built in Java using a modified version of a tile rendering engine.
- Uses data structures to generate pseudo-random worlds with similar structures and interactions.
- Uses serialization to persist world states and settings.

### Scheme Interpreter | Python

April 2022

- Implemented the core features for a lisp interpreter in Python using a recursive descent parser and evaluator.
- Utilized significant understanding of lexical and syntactic analysis as well as input parsing.
- Implemented tail recursion through trampolining to optimize space complexity.

### Blog Roll | JS/Node/Pug.js

July 2022

- Implemented a pseudo build system that parses JSON into HTML files (creates navigation structure, and populates content into each individual page).
- Implemented a template system utilizing Pug.js (Jade.js) to eliminate repetitive code and increase code readability.

### Brandogn.com | HTML/CSS/JS

July 2022

- A light weight static website built with an emphasis of minimalistic code (40 lines JS, ~130 lines CSS).
- Built with vanilla HTML/CSS/JS; uses some Node to output HTML to display all images in a folder.

## EXPERIENCE

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### UC Berkeley EECS Department

Berkeley, CA

*Academic Intern*

*January 2022 – May 2022*

- Facilitated and guided weekly lab sessions for CS 10, an intro CS class serving 150 students.
- Assisted students in learning problem solving and debugging skills, and fostered a welcoming environment in lab. (lab duties included: checkoffs, assisting in debugging code, answering conceptual questions)
- Taught basics of computing in Snap! and Python. ([cs10.org](https://cs10.org): Recursion, Algorithmic Complexity, OOP, etc.)

### Pioneers In Engineering

Berkeley, CA

*Electrical Engineer*

*September 2022 – Present*

- Participated in club meetings, volunteered in Fall Robotics Competition 2022 promoting STEM education for under-served Bay Area high school students; 700+ students in 30+ schools ([pioneers.berkeley.edu](https://pioneers.berkeley.edu))
- Designed the PCB for a keyboard macropad to learn the basics of KiCad circuit design software and soldering.
- Debugged hardware and oversaw hardware lending during the Fall 2022 Competition.

## TECHNICAL SKILLS

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**PROGRAMMING:** Java | Python | HTML/CSS/JS | Shell | Node | Scheme | Rust

**FRAMEWORKS/LIBRARIES:** JUnit Testing, React, NumPy

**PLATFORMS:** Linux/UNIX, Git, L<sup>A</sup>T<sub>E</sub>X, IntelliJ, Nvim, VSCode, Adobe Illustrator, Adobe Premier, FL Studio

**COURSEWORK:** Data Structures, Algorithms, Foundations of Data Science, Linux Systems Administration, Discrete Math, Probability Theory, Structure and Interpretation of Computer Programs