

Brandon Wong

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EDUCATION

University of California, Berkeley

Berkeley, CA

Bachelor of Arts in Computer Science | GPA: 4.0

Expected Spring 2025

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

PROJECTS

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.

Pursuit Curves | *C++/SDL2*

December 2022

- A simple program to simulate and visualize the motions of two projectiles.
- Utilizes the SDL2 api for the engine to render points onto a Cartesian plane; implemented basic math for simulation (midpoint algorithm, trigonometry, basic physics).

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

August – December 2022

- Scripted 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 redundancy and increase code readability.

EXPERIENCE

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: 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)
- 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

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

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

PLATFORMS: Linux/UNIX, Git, L^AT_EX, IntelliJ, Nvim, VSCode, Adobe Illustrator, Adobe Premier, FL Studio