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, Efficient Algorithms, Foundations of Data Science, Linux Systems Administration, Cryptography, Discrete Math, Probability Theory, Linear Algebra, Computer Architecture

Experience

Readable — Berkeley, CA

Software Developer, Project Manager — *September 2022 - December 2022*

- Collaborated in team of 5 to develop a solution for improving focus in digital reading through iterative design.
- Prototyped a functional chrome extension which could focus on single DOM elements, blur background, and modify text styles; designed and implemented a multi-website-compatable feature to traverse the DOM tree.
- Conducted interviews with users to improve the user interface and functionality of the extention.
- Project rated an average of 9.3/10 in Berkeley's Fall 2022 Jacobs Design Showcase.

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.
- 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.

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.
- Use path-finding algorithms and K-D trees to generate pseudo-random worlds with similar structures and interactions.
- Uses serialization to persist world states and settings.

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.

Naive Neural Network *(in progress)* | *Python, Numpy, Pandas* — December 2022 – Present

- A simple forward feeding neural network built from scratch for OCR based on the MNIST dataset.

Technical Skills

PROGRAMMING: Java, Python, HTML/CSS/JS, Shell, Node | C++, Scheme, Rust
FRAMEWORKS/LIBRARIES: JUnit Testing, React, NumPy, CMake, TensorFlow
TOOLS: Linux/UNIX, Git, LaTeX, Intellij, Nvim, VSCode, Google Colab
MISC: Adobe Illustrator, Adobe Premier, FL Studio, Blender