Bill J. Wu

(626) 782-2926 || billjwu.github.io/ || bjwu@ucsd.edu || github.com/billjwu || La Jolla, CA

Education

University of California San Diego Expected Graduation: June 2022
B.S. Computer Science || Major GPA: 3.67 || Overall GPA: 3.31
East Los Angeles College August 2017 – June 2019
Overall GPA: 3.82 || Dean's Honor List: All Semesters || President's Honor List: 3 Semesters

Coursework

Software Engineering || Advanced Data Structures || Design and Analysis of Algorithms || Theory of Computability
Principles of Computer Operating Systems || Components and Design Techniques for Digital Systems
Programming Languages: Principles and Paradigms || Machine Learning || Object-Oriented Design

Experience

Amazon, *Incoming Software Development Engineer Intern* June 2021 – September 2021

Computer Science Volunteer Tutor, *East Los Angeles College* August 2018 – December 2018

- Tutored **100+ students** in Object-Oriented Design in **C++**
- Guided students in debugging their code
- Led bi-weekly review sessions to prepare students for exams

Projects

Pomodoro Timer Web App January 2021 – March 2021

- Created a website encompassing the Pomodoro Technique alongside a software engineering team
- Contributed through full-stack development and website design using **Node.js**, **JavaScript**, **HTML**, and **CSS**
- Tested functions and implemented test coverage using **Cypress**
- Facilitated communication and teamwork between the development and design teams

Graph Representation of Data December 2020

- Implemented the graph ADT, its basic operations, and populated it using file data in **C++**
- Returned the shortest unweighted and weighted paths using BFS and Dijkstra's algorithm
- Found connected components based on a threshold using BFS

Feed-Forward Neural Networks December 2020

- Constructed feed-forward fully-connected neural networks for digit classification using **PyTorch** and **Python**
- Implemented a Multilayer Perceptron with hidden layers and logistic activation functions
- Trained and tested the networks on the MNIST dataset and optimized parameters for the best test accuracy

Huffman Encoding November 2020

- Created a program to compress and decompress files using Huffman Coding in **C++**
- Built a Huffman tree using file data and utilized it to encode and decode files

IEEE-754 Single Precision Floating Point Converter November 2020

- Extracted bytes from binary file in **C** and converted each byte to an IEEE FP value using **ARM assembly**
- Calculated values using bitmasks to extract certain bits from each byte, shifted the bits, then added them
- Printed three values for each byte on one line: the FP value, the IEEE FP value, and the decimal value

Technical Skills

- **Programming Languages:** Java, C++, C, JavaScript, HTML, CSS, Python, Assembly, Bash, Verilog, SystemVerilog
- **Frameworks/Libraries/Tools:** Node.js, Jest, Cypress, JUnit, PyTorch, Unix, Git, RStudio
- **Concepts:** Data Structures, Algorithms, Digital Logic, Agile Paradigm