Omar Elbasri

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Education

University of Florida Gainesville, Florida

Bachelor of Science in Computer Engineering *December 2026*

Relevant Coursework: Programming Fundamentals 1 & 2, Data Structures and Algorithms, Computer Organization, Digital Logic & Computer Systems, Microprocessor Applications (IP)

Experience

Teacher's Assistant August 2022 - May 2023

NeoCity Academy *Kissimmee, Florida*

- Developed programs in JavaScript integrating with Instructure Canvas to automatically leave comments on student submissions
- Increased efficiency of grading within Canvas by automating certain tasks
- Utilized TamperMonkey to add buttons to HTML to leave grades and comments on assignments

Certifications August 2021 - May 2023

NeoCity Academy *Kissimmee, Florida*

- CompTIA A+ (CompTIA 1001 + CompTIA 1002)
- MTA Windows OS Fundamentals
- MTA Security Fundamentals

Projects

Intel 8080 Emulator/Assembler | *C, C++, CPU Design, Assembly* June - August 2024

- Developed an emulator in **C** and assembler in **C++** for the Intel 8080 microprocessor
- Analyzed original documentation to create an accurate emulator program
- Developed a one-pass assembler for basic debugging, then improved on the design by creating a two-pass assembler to implement labels and pseudo-instructions

Graph Manipulation | *C++, GitHub, Makefile* October - December 2023

- Collaborated with a team of 3 to make a program to test graph algorithms
- Utilized GitHub to track progress and make revisions on work
- Maintained consistent styling and programming strategies by clearly communicating expectations
- Implemented an algorithm to generate a random, fully connected graph, improving on a previous algorithm by more than **100%.**
- Implemented Djikstra's Algorithm, Bellman-Ford, and Floyd-Warshall for calculating the shortest path between pairs of nodes, with a system for comparing how long each algorithm took.

Minesweeper | *C++, SFML, Makefile, Visual Studio* March - April 2023

- Developed Minesweeper in **C++** utilizing **SFML** for GUI and mouse input
- Integrated a timer and real-time reaction to input
- Added ability to read a prebuilt board from a binary file
- Utilized Visual Studio build tools to streamline the compilation process

Technical Skills

Languages: Java, Python, C/C++, JavaScript
Developer Tools: Git CLI, Github, JetBrains Suite, Visual Studio, Visual Studio Code, WSL