Monisha Krothapalli

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EDUCATION

University of Pennsylvania - Philadelphia, PA 19104 | (215) 898-5000
Bachelor of Science in Engineering (B.S.E.), Computer Science | Aug 2023 - May 2027 (Expected)
Relevant Courses: Data Structures and Algorithms, Intro to Computer Systems, Linear Algebra, Statistics, Discrete Math
Organizations: Women in Computer Science (Advocacy Committee)

SKILLS

Java, Rust, OCaml, Python, C++, C#, C, Assembly, HTML/JavaScript/CSS, Node.js, Flask, React, MATLAB, WebAssembly, Figma

PROFESSIONAL EXPERIENCE

Quadrant Technologies | Software Engineering Intern | July 2024 - August 2024

Develop For Good | Product Manager | Nov 2023 - Feb 2024

- Led a 6-developer team to design an app that recommended STEM programs to teachers, students, and parents.
- Managed communications with our client, Be a Geek, a nonprofit focused on increasing black representation in STEM.
- Guided team through the development process from user interviews to creating the low/hi-fidelity prototypes using Figma.
- Responsible for leading client meetings, internal team meetings, and managing the product timeline from start to finish.

Microsoft | Leap and Discovery Program Volunteer | Aug 2022 - Dec 2022

- Conducted a market research project to attract more underprivileged youth to the Leap/ Discovery programs.
- Compiled and analyzed data of over 50 similar youth programs to identify areas of weakness and strength
- Presented key suggestions for curriculum/overall program improvement to program founders and developers.

KEY PROJECTS

LC4 Disassembler | Mar 2024 - Apr 2024

Tools – C, Assembly

- Built a disassembler in C that takes machine code and reverse assembles it to assembly language code.
- Took a .obj file and parsed through contents to extract and store code/data sections and corresponding PC addresses.
- Parsed through extracted code and translated binary to assembly code based on the LC4 ISA instructions to produce a .asm file.

2048 Clone | Nov 2023 - Dec 2023

Tools – Java

- Built a clone of the game 2048 using Java for backend and frontend
- Improved game functionality by adding an undo move button that allowed the user to return to all their previous moves.

Twitterbot | Nov 2023 - Nov 2023

Tools – Java

- Built a Twitterbot using a Markov's Chain model trained on a series of tweets that can generate a tweet of a desired length.
- Took a file of tweets and used it to map the probability distribution of adjacent words.
- Probability distribution is used to pick the next word in the sequence until a tweet of desired length is generated.

Brush | Jan 2023 - May 2023

Tools – Rust, HTML/JavaScript/CSS, Node.js, WebAssembly

- Built a beginner friendly programming language called Brush to create easy digital art along with 4 other students.
- Used Rust in the backend to build an interpreter and compiler for the Brush syntax we designed.
- Built front end for users to practice writing code in our language and view their designs immediately.

Kiki | Nov 2022 - Jan 2023

Tools – C#, Game Development

- Used the Minimalist Game Development Framework, to develop a re-imagined version of the game Kirby's Adventure.
- Worked with 4 other students to improve the game with improved storytelling and visuals.
- Designed our own assets, storyline, and player-game dynamics using the MDA framework.

LEADERSHIP EXPERIENCE

Girls Who Code Club | Founder and President | Sep 2020 - Jun 2023

- Taught coding languages such as C++, Python ,and Java and how to build projects such as websites and apps to 15+ members.
- Hosted college panels, invited multiple guest speakers throughout the year, and participated/placed in competitions as a club.
- Organized and created a curriculum for middle school coding workshops with 30+ participants across the district.