

# 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*

## SKILLS

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

## PROFESSIONAL EXPERIENCE

**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** | 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** | 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

*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** | 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** | 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

**Penn Women In Computer Science | Committee Member** | Sep 2023 - May 2024

- A member on the WICS advocacy committee focused on organizing events to empower minority groups in computer science.

**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.