

Rafael Khoury

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EDUCATION

University of Michigan

Bachelor of Engineering in Computer Science

Ann Arbor, MI

Expected Dec 2025

- **Coursework:** Software Engineering, Computer Organization, Data Structures & Algorithms, Discrete Mathematics, Foundations of Computer Science, Web Development, Programming & Intro Data Structures
- **GPA:** 3.86/4.00

EXPERIENCE

Incoming Software Engineering Intern

Whirlpool

May 2024 – Aug 2024

Benton Harbor, MI

Software Engineering Intern

Forvia

June 2022 – Aug 2023

Northville, MI

- Developed a highly efficient Python script for CSV table lookup, streamlining the data retrieval process
- Designed a new Memory Seat Module concept in CAD, which resulted in a 30% cost reduction
- Identified new benchmarking metrics to evaluate competitor processes in order to find cost reduction opportunities
- Successfully reinstated the operational status of the differential GPS system to validate radar sensor data accuracy

PROJECTS

Beacon | *Java, Android Studio, Firebase Database*

- Led team of five members to develop Java app for up-and-coming artists, emphasizing their community exposure
- Integrated Firebase for real-time updates, enabling dynamic profile modifications and app feed enhancements
- Developed full-stack application, contributing to architecture, activities, and fragments for high-quality delivery
- Orchestrated meetings, allocated tasks, ensured timely completion, and delivered high-quality results

Machine Learning Classifier | *C++*

- Engineered a program utilizing NLP and ML to identify forum post subjects, leveraging naive-Bayes classification
- Implemented efficient algorithms for accurate subject identification, enhancing forum content organization

Stock Market Simulation | *C++*

- Utilized priority queues to develop a stock market simulator that outputs the best buy and sell options of each day
- Leveraged additional data structures to efficiently monitor and track the running median of stock prices

MHacks Hackathon | *HTML, CSS, React*

- Leveraged HTML, CSS, and React proficiency to construct front end for an AI personal tutor application
- Innovated project idea and integrated front end with back end for seamless functionality

WAR Simulator | *Java, JavaFX*

- Independently designed Java-based strategic board game akin to Risk, focused on conquering rival territories
- Utilized JavaFX GUI for immersive visual interface, enhancing player engagement and interactive experience
- Applied Adobe Photoshop skills to divide the world map into distinct territories for ease of manipulation

Letterman | *C++*

- Implemented advanced breadth-first search and depth-first search algorithms for word transformation
- Utilized efficient stack and queue data structures for seamless algorithmic implementation

TECHNICAL SKILLS

Languages: C/C++, Java, Python, JavaScript, HTML/CSS

Developer Tools: Git, Android Studio, JavaFX, VS Code, Visual Studio, IntelliJ, Eclipse

Languages Spoken: English (Native), Portuguese (Native), Spanish (Advanced), French (Intermediary)