Farhan Mahbub

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EDUCATION

University of Central Florida — GPA: 3.90/4.00
Bachelor of Science in Computer Science + Minor in Mathematics — *Expected Grad: May 2025*
Relevant Courses Data Structures and Algorithms I & II, Object-Oriented Programming, Artificial Intelligence, Computer Logic & Organi

University of Central Florida
Planned Master of Science in Computer Science — *Expected Start: August 2025*

EXPERIENCE

Lockheed Martin — *Jun. 2023 – Present*
Software Engineering CWEP
- Executed embedded software development using **C++** and simulations, ensuring robust performance in complex environments, minimizing system errors by **30%**, and increasing reliability.
- Implemented data validation measures on a telemetry internal tool using **Python** and **PyQT**, maintaining data integrity and reducing data discrepancies by **20%**.
- Collaborated with engineers to gather and document project requirements, accelerating project development.

Knight Hacks — *Aug. 2023 – Jul. 2024*
Full-stack Developer
- Collaborated with other engineers to create a website advertising the KnightHacks club and UCF hackathons.
- Utilized **tRPC** and **React** to create a simple and interactive hackathon profile form, increasing user registration by **10%** for the school's annual hackathon.
- Tested the hackathon website and patched **4** UI bugs that could've impacted UX.

PROJECTS

Lootcode 10 | *TypeScript, Svelte, SvelteKit, Llama3, Monaco, JSON*
- Achieved **3rd** place at Chainguard's challenge out of **9** times at ShellHacks for building a problem-solving game.
- Designed the UI to render out competitive programming problems and Monaco text editor for user engagement.
- Utilized **Llama3**'s LLM API to generate hints to guide users to solve a problem when they get stuck.

Code Clash | *TypeScript, Mithril, TailwindCSS, Express.js, Socket.io, MongoDB*
- Collaborated with 5 other engineers to create a 1v1 competitive battle game of solving leetcode problems.
- Created a **MongoDB** schema and developed an API for managing the user's in-game statistics.
- Implemented a match-making system to connect 2 players with an elo rating system using **Socket.io**.

Review Summarizer | *TypeScript, React, TailwindCSS, Express.js, Next.js, OpenAI, Puppeteer*
- Won **1st** place in Microsoft & RBC's challenge out of **11** teams at KnightHacks for building a review summarizer for products with GenAI.
- Designed an user-friendly main landing page that fits the Windows 95 aesthetic using **React** and **TailwindCSS**.
- Leveraged **OpenAI**'s LLM API to generate a product's pros and cons and an overall consensus summary.

Handy Dollar | *TypeScript, React, TailwindCSS, Next.js, Supabase, Azure, Plaid, OpenAI*
- Secured **2nd** place in Google's challenge out of **104** teams at ShellHacks for building an AI budgeting tool.
- Leveraged **Azure**'s AI Vision and **OpenAI**'s LLM API to extract and correlate receipt data with transactions.
- Designed a UI to display a list of transactions and analytics using the **Plaid** API, **React**, and **TailwindCSS**.

Find My Professors | *TypeScript, React, TailwindCSS, Next.js, Go, GraphQL, SQL, PostgreSQL*
- Secured **1st** place in the KnightHacks projects showcase out of **8** teams for building a tool for college students looking to find information on professors.
- Created **GraphQL** schemas for structuring the school and course object queries.
- Implemented and debugged **11** query resolver functions for schools and courses using **Go** and **GraphQL**.

TECHNICAL SKILLS

Languages: Java, Python, C, C++, Go, PHP, HTML, CSS, JavaScript, TypeScript, SQL, GraphQL
Frameworks: TailwindCSS, Node.js, React, Svelte, Vite, Next.js, SvelteKit, Express.js, Flask, tRPC, Socket.io
Tools: Git, GitHub, Figma, Ubuntu, OpenAI, AWS, Azure, Apache, Docker, MySQL, PostgreSQL, MongoDB