Ameen Neami

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Education

McMaster University Hamilton, ON

Bachelor of Mechatronics and Biomedical Engineering Co-Op | ***3.8/4.0*** *Expected Graduation: April 2027*

- 2024 Recipient of the Rideau Hall Foundation's Ingenius+ National Innovation Challenge Award (for **Ocularity**)
- 2023 United Nations Sustainable Development Goals Pitch Competition, Fourth Place

Experience

Software Team September 2024 - Present

McMaster Medical Engineering Design Team *Hamilton, ON*

- Developing innovative software solutions, leveraging robotics and C/C++ for medical engineering projects.

Founding Engineer September 2024 - Present

Friedmann, IBM Ecosystem *Toronto, ON*

- Leading the development of an **automated full-stack financial advice platform** designed to streamline client interactions and deliver personalized solutions.
- Building **scalable**, **cloud-based infrastructure** in collaboration with IBM engineers, optimizing workflow automation and enhancing real-time data adaptability.

Software Development Intern May 2024 - September 2024

Ressam Gardens Living Lab *Hamilton, ON*

- **Engineered interactive cognitive games** in C# to enhance cognitive abilities for 60+ senior residents.
- Integrated Microsoft Azure REST APIs in Unity to deliver natural vocal feedback, enhancing accessibility.
- Developed an AI-driven **full-stack dashboard** with **React, Next.js, Chart.js, and MongoDB** to monitor 6 key cognitive skills (memory, attention, etc.) through **real-time data visualization** and **AI-generated reports**.
- Enabled comprehensive professional commenting features, allowing healthcare staff to leave time-stamped notes and **download automated resident report PDFs** fostering a holistic, data-backed approach to caregiving.

Controls Team November 2023 - May 2024

McMaster Advanced Space Systems *Hamilton, ON*

- Developed **C++ control algorithms** improving accuracy by 35% and automating real-time data collection.
- Collaborated with **20+** team members to develop DIY radio telescope and programming amplifier input to observe the effects of analog extraplanetary conditions in collaboration with the **Canadian Space Agency**.
- Integrated automated software to visualize **MATLAB** frequency data via **React** dashboard for real-time analysis.

Projects

Full-Stack Development, Arche Biotechnologies | *Node.js, Tailwind CSS, MongoDB, React Native* July 2024

- Engineered a full-stack web application for a medical equipment management startup, leveraging the **MERN stack** and enabling seamless interfacing and monitoring of custom sensor components.

StanZa | *Node.js, Express.js, React, Next.js* June 2024

- Developed a full-stack web application enabling users to submit daily 2-5 line stanzas based on daily changing prompts, **store submissions**, view their own contributions, and upvote favorite poems in a **Reddit-style** format.

Ocularity, Eye-Tracking Communication System | *Python, AI Model Training* September 2023 - August 2024

- Spearheaded development of contactless eye-tracking communication for those suffering from neurodegenerative disease and post-stroke symptoms using **Python**, **OpenCV**, and trained **YOLO (v3)** model for IR-LED camera.
- Architected and developed a dynamic on-screen keyboard with **React**, enabling hands-free user input.

Technical Skills

Languages: Python, JavaScript, C/C++, C#, HTML/CSS
Frameworks & Libraries: React, Node.js, Flask, Next.js, Chart.js, YOLO (v3), Tailwind CSS, Flutter, Matplotlib
Tools & Platforms: MongoDB, SQL, Google Cloud Platform, Microsoft Azure, MATLAB, CI/CD
Concepts: Full-Stack Development, REST APIs, Cross-Platform Development, AI Model Training, Data Visualization