

Jaavin Mohanakumar

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Skills

Proficient React, TypeScript, Next.js, C, C++, JavaScript, Python, Java, C#, .NET, PostgreSQL, Azure, MongoDB
Familiar Rust, Verilog, ARM-Assembly, Google Cloud, AWS, Microsoft SQL, GraphQL, React Native, OpenCV, MATLAB

Experience

Software Developer Intern | IPEX Management Inc. | Oakville, ON

May 2024—August 2024

- Developed a real-time factory alert system in **C#** using **.NET**, enabling audible warnings for critical machine failures, reducing incident response time by **30%** and minimizing production line downtime.
- Deployed a network configuration server for IPEX's corporate office, supporting **200+** users by automating **IP allocation**.
- Enhanced and **maintained** legacy systems from my first term, optimizing performance in the file transfer service and reducing error rates in the API Gateway.

Software Developer Intern | IPEX Management Inc. | Oakville, ON

May 2023—August 2023

- Implemented file transfer service in **C#** using **.NET** for business-critical process reducing downtime from 14% to 2%.
- Reduced missed promises on API Gateway improving accuracy of item-vendor mapping by 183 basis points on **ASP.NET**.
- Planned migration of a real-time application from **Microsoft SQL** server to **MongoDB** for key business service.

Software Development Co-Lead | FIRST Robotics Team 1325 | Mississauga, ON

September 2021—June 2022

- Led the design, implementation, and testing of software systems in **Java** for a 120lb competitive robot.
- Innovated in autonomous programming using **PID controllers**, **control systems**, and **computer vision**.
- In this community robotics team previously sponsored by NASA, the robot has won many competitions and was awarded the Excellence in Engineering Award at the FIRST Robotics World Championship in Houston.

Projects

MeGPT | React, TypeScript, Next.js, Google Cloud

megpt.xyz

- MeGPT is a tool to create an AI clone of yourself, in one simple link – making "you" more interactive and discoverable online.
- Reached 518 users and over 2.2K visitors within the first 24 hours of launch.
- Featured on [McMaster University's Faculty of Engineering News](#), highlighting impact in personal and business applications.
- Admitted to \$10K microgrant program from McMaster Engineering, and a client of the [Innovation Factory](#) in Hamilton.
- Speak to my MeGPT here: megpt.xyz/jaavin

WIFOM? | Python, OpenCV, Django

youtube.com/watch?v=dVGIT4DPtZg

- What's In Front of Me? (WIFOM?) is an AI smart glass that uses machine learning object detection to relay the surroundings real-time to visually impaired users.

Leadership

Assistant Project Manager | McMaster Rocketry Team

macrocketry.ca

- Coordinated between the software controls sub-team of 15 members and the project manager to drive successful rocket launch at Spaceport America in New Mexico.
- Orchestrated the team's timelines, coordinating tasks among a rocketry team of over 70 highly skilled members.

Committee Member | McMaster Engineering 1 Operating Committee

eng.mcmaster.ca

- Consulted with the director of engineering 1, administrators, and instructors about enhancing the Engineering 1 program, as a student voice for over 1000 first-year engineering students.
- Reviewed the Canadian Engineering Accreditation Board (CEAB) Attribute Summary to help evaluate and align the school's goals with standards in engineering education.

Education

B.Eng. in Computer Engineering (Co-op) | McMaster University | Hamilton, ON

September 2022—April 2027

- Awards:** Faculty of Engineering Award of Excellence Scholarship