

Mohamed Ebraheem

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EDUCATION

University of Toronto Mississauga

B.Sc. in Computer Science – Major in Mathematics, Information Security Specialist

Mississauga, ON

Expected Apr 2028

EXPERIENCE

Software Engineering Associate

Aug 2025 – Present

Mathematics & Computational Sciences Society (MCSS)

Mississauga, ON

- Developing large-scale applications for the UTM student community with a focus on usability, performance, and security.
- Built an **LLM-powered Discord assistant** to handle student registration, accessibility commands, and mentor scheduling.
- Improved the official MCSS website, implementing secure workflows, chatbot logic, and prompting strategies for student-facing tools.

Web Development Lead

Aug 2025 – Present

University of Toronto Autonomous Scale Racing (UTASR)

Toronto, ON

- Led a team of 5–6 developers; organized sprints, assigned tasks, reviewed code, and coordinated cross-team dependencies with ML and hardware divisions.
- Implemented **cloud storage and schema management** for lap recordings and telemetry data, ensuring accessibility for training and analysis.
- Built dashboards to display **real-time streaming data** (state vectors, throttle, steering, car positions) and **historical playback** of previous laps with camera feeds.
- Integrated role-based authentication and secure dataflows from edge devices (Jetson) to cloud storage and React dashboards.
- Maintained responsive React/Tailwind frontend, improving accessibility and usability across devices by 25%.

Web Developer

Jun 2024 – Present

Panacea Karate Academy

Mississauga, ON

- Developed a full-stack membership platform (**React + Material UI, Spring Boot + PostgreSQL**) with JWT authentication and RBAC aligned to OWASP standards.
- Designed and integrated a **Stripe billing system** with automated monthly charges, retries, and SendGrid receipts.
- Containerized services with Docker, reducing environment setup by 50% and improving deployment consistency.
- Implemented **audit logging** to capture member/student changes, enhancing accountability and system reliability.

PROJECTS

DiscoverMyUni (Team of 6)

Django, Docker, Web Scrapers, ML-assisted Parsing

- Co-developed Django backend and templated frontend to centralize UTM club events with search and filters.
- Integrated scrapers for Discord, Instagram, and websites; supported ML pipelines for event classification and accuracy.
- Practiced agile workflows with GitHub pull requests, branches, and sprint planning in a 6-member team.

TECHNICAL SKILLS

Languages: Java, Python, JavaScript/TypeScript, SQL, HTML, CSS

Frontend: React (Material UI), Tailwind, Django templates

Backend: Spring Boot, Django, Flask, REST APIs

Databases: PostgreSQL, MongoDB, Firebase

DevOps/Tools: Docker, Git/GitHub, Postman, Netlify, Railway/Fly.io

Security: JWT, RBAC, authentication, input validation, OWASP practices

ML/AI Exposure: Python (NumPy, Pandas, scikit-learn), data preprocessing, web scraping for datasets