

MOHAMED ELSOBKY

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Education

University of Ottawa

Honours Bachelor of Science in Computer Science in French - Perfectly bilingual - 3.70/4.00 GPA

Sep. 2024 – Present

Ottawa, Ontario

- Relevant Coursework: Data Structures, Digital Systems, Computer Architecture, Software Engineering

Experience

Automation Engineer Intern

Pharmasave

April 2025 – September 2025

Portland, Ontario

- Developed **workflow automations** to optimize weekly blister-pack dispensing, **saving 2 hrs per staff/week**.
- Built a Proxmox server with WireGuard VPN to replace TeamViewer, **cutting remote-access issues by ~90%**.
- Enforced MFA on remote users and placed all apps behind VPN, allowing staff to **access pharmacy PCs off-hours**.

Software Engineer

Muslim Student Association

Summer 2025 – Present

University of Ottawa

- Developed **Uomsa.ca**, eliminating GoDaddy builder and **cutting annual costs by \$500**.
- Led an **8-developer** team to rebuild organizational IT infrastructure supporting **1,000+ students**.
- Collaborated in an Agile team using **sprints**, GitHub **PRs**, and **CI/CD** pipelines to maintain high code quality.
- Built a multi-organization library system with **React** and **Supabase** used by **5+ organizations** (UOMSA, CUMSA, several Ottawa mosques) to manage book sharing and community resources.

Projects

☒ Video Games AI Tool | C#, C++, Node.js, Docker, Redis, PostgreSQL, OpenRouter API

July 2025

- Built a cloud **AI dialogue system** that plugs into games and generates rich character interactions using large LLMs.
- Engineered a **custom API** backend using Express, Docker, and Redis for large traffic rate limiting and API key auth.
- Added usage analytics dashboards and player entitlement validation via **Steam & Epic Online Services APIs**.
- Developed Unity (**C#**) and Unreal Engine (**C++**) **SDK**, reducing integration time from **hours to <10 minutes**.

UTaste (Android App) | Java, Android Studio, SQL, GitHub, JUnit, PlantUML

November 2025

- Developed a restaurant workflow Android app, implemented role-based access, and built a local **SQL** data layer.
- Integrated **OpenFoodFacts API** for real-time ingredient and nutrition data; recipe builder with tracked macros.
- Created **UML diagrams** and implemented **JUnit** tests achieving 85% coverage of core application logic.

GTA Game Server | C++, C#, x86-64 assembly, IDA Pro, Vue.js, MySQL

January 2025

- Reverse-engineered GTA V using **C++** and **x86-64 assembly** to build custom modding tools.
- Developed an online roleplay server in **C#** and **MySQL** with persistent player state and custom gameplay logic.
- Built **Vue.js UI components** and integrated them with server events for a smooth in-game experience.

Technical Skills

Languages: Python, Java, C++, C#, TypeScript, SQL, x86/64 Assembly

Technologies: Linux, Express, JUnit, PlantUML, Nginx, Redis, Proxmox, PostgreSQL, WireGuard, Cloudflare

Developer Tools: Git, Docker, Android Studio, IntelliJ, PyCharm, VS Code, Unity, Unreal Engine

Practices: CI/CD, Agile Methodology, Secure Coding, Object Oriented Programming, API Design, Unit Testing, UML Modeling