

# 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

## Technical Skills

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

**Technologies:** Linux, Windows, Express, JUnit, PlantUML, Nginx, Redis, Proxmox, PostgreSQL, Kubernetes, Wireguard

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

**Practices:** CI/CD, Agile Methodology, Secure Coding, Object Oriented Programming, REST API, IP Networking, Least Privilege, High Availability, Unit Testing, UML Modeling

## Experience

### Software Developer Student

June 2025 – Present

*University of Ottawa MSA*

Ottawa, Ontario

- Developed [uomsa.ca](#) in Next.js, eliminating GoDaddy builder and **cutting annual costs by \$500**.
- Led an **8-developer Agile team** to build a library system supporting **1,000+ students in 5 organizations**.
- Built **CI/CD pipelines** with **Jenkins** to automate builds, tests, and releases across **4 Git repositories**.
- Performed **code reviews** and enforced branching standards as **Scrum Master** to ensure **stable releases**.

### Automation Engineer Intern

April 2025 – September 2025

*Pharmasave Canada*

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**.

## Projects

### MarketSnipe (Hackathon Winner) | Node.js, React, Supabase, Vercel, Yellowcake API

January 2026

- Won **uOttaHack 8** by building an **AI tool** that turns online discussions into actionable market opportunities.
- Shipped **2 features in 36 hours** using **React, Supabase, and Yellowcake API** to scrape relevant Reddit posts.
- Collaborated in a **4-person team** using **GitHub** for code reviews and pull requests, and deployed the MVP on **Vercel**.

### Journale AI | C#, C++, Node.js, Docker, Redis, PostgreSQL, OpenRouter API

January 2026

- Built a cloud **AI dialogue system** that plugs into games and generates rich character interactions.
- 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.

### Home Lab Infrastructure | Proxmox, Kubernetes, Cloudflare Tunnel, Traefik, Jenkins, Git

December 2025

- Built a 3-node **Kubernetes** cluster to **build, test, and validate real-world deployments** before production.
- Set up **GitHub auto-deployments** with **Jenkins** for continuous build and deployment to my servers.
- Securely exposed services via **Cloudflare Tunnels** and **Traefik** on my **custom domain**, with no port-forwarding.