SYED AMMAR ALI

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Canada: Milton, ON/**United States:** Oswego, IL
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Portfolio: https://codexammar.github.io/

PROFESSIONAL SUMMARY

Computer Engineering graduate with hands-on experience in real-time systems, computer vision, and full-stack development. Led the design of a TensorFlow-based anomaly detection system using Unity and OpenCV. Built secure, modular backend APIs with MongoDB and FastAPI. Dual U.S.-Canadian citizen seeking impactful roles in software engineering, backend development, or AI-driven systems.

TECHNICAL SKILLS

Languages: Python, Java, Swift, SQL, JavaScript
Frameworks/Tools: FastAPI, MongoDB, Docker, SwaggerUI, Unity3D, Quartus, OpenCV, TensorFlow, JUnit, Git, Supabase
Concepts: Anomaly Detection, JWT Authentication, Object-Oriented Design, Agile Methodologies, Real-Time Processing, Model Evaluation (F1, SSIM, MSE)
UI/Software: MATLAB, NetBeans, Eclipse, VS Code, Adobe Creative Suite, DaVinci Resolve

TECHNICAL PROJECTS

Anomaly Detection in Augmented Reality — *Team Lead*
Toronto Metropolitan University | Sept 2024 – Apr 2025
- Built a real-time anomaly detection system using EfficientNetB0 + Autoencoders, combining SSIM & MSE loss for accurate reconstruction-based detection.
- Trained on synthetic datasets (Unity3D Perception) fused with real-world data (Kaggle).
- GUI developed with Python, OpenCV, and customtkinter, supporting real-time webcam anomaly overlays and heatmaps.
- Achieved up to 94% classification accuracy on select classes (e.g., bananas).
  - GitHub: https://github.com/codexammar/Detection-Program.git

Full-Stack Library Management System — *Backend Engineer*
Toronto Metropolitan University | Jan 2025 – Apr 2025
- Developed a fully functional **library management API** with **FastAPI**, **MongoDB**, and **SwaggerUI**.
- Built local RESTful endpoints supporting borrowing, returning, adding, and editing books.
- Implemented JWT authentication and role-based access (admin vs user).
- Designed for Docker deployment to **Azure App Service**, though currently running locally.
  - GitHub: https://github.com/codexammar/AutomatedLibrarySystem

E-Learning and Rewards Web Platform — *Project Manager*
Toronto Metropolitan University | Sept 2024 – Dec 2024
- Built a web app with Supabase, JavaScript, and embedded multimedia learning.
- Enabled users to log in, earn points, and unlock training modules.
- Collaborated across teams to ensure full-system compatibility.
  - GitHub: https://github.com/ItsGoldeneyes/fleetrewards

EDUCATION

Bachelor's of Engineering(BEng) in Computer Engineering
Toronto Metropolitan University | Sept 2020 – Apr 2025
- Relevant Coursework: Intelligent Systems, Software Testing, Computer Vision, Network Security, Distributed Systems, Project Management

CERTIFICATIONS

- IBM Cybersecurity Fundamentals (2024)

WORK EXPERIENCE

Sobeys – Produce Clerk | Milton, ON
Jun 2023 – Present
Maintained inventory systems and supported daily operations in a high-volume produce department.

Milton Hospital – Volunteer | Milton, ON
Nov–Dec 2017
Assisted elderly and special needs patients during holiday events.

AWARDS & LANGUAGES

Awards:
- ACER IBT English – Award for Excellence (Australian Council for Educational Research)

Languages:
- English (Fluent), Urdu (Fluent), Arabic (Intermediate)

RELEVANT LINKS

- **Self-made Website:** https://codexammar.github.io/
- **LinkedIn:** https://www.linkedin.com/in/ammarswork/
- **GitHub:** github.com/codexammar
- **Contributed Repository:** https://github.com/ItsGoldeneyes/fleetrewards