Muhammad Umar Khan

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TECHNICAL SKILLS

Languages: Java, Python, C#, JavaScript/TypeScript, SQL
Frameworks: Spring Boot, Spring Security, ASP.NET Core, FastAPI, Node.js, React, Tailwind CSS
Databases: PostgreSQL, Redis
Tools & DevOps: Git, GitHub Actions, CI/CD, Docker, AWS (Elastic Beanstalk, RDS, S3, CloudFront), REST APIs, JWT Authentication, JUnit, Celery, Gemini API

EDUCATION

Wayne State University | **Detroit, MI, USA** **Jan. 2025 – Aug. 2026**
MS in Computer Science GPA: 3.93

University of Windsor | **Windsor, ON, Canada** **Sep. 2020 – Apr. 2024**
BSc Honours Computer Science with Software Engineering Specialization

PROJECTS

AutoOps AI – [Live] | *ASP.NET Core, C#, React, TypeScript,Python, FastAPI, PostgreSQL, Redis, Celery, Docker, Railway, Vercel*

- Built a polyglot AI document processing platform with an ASP.NET Core REST API and Python Gemini 2.5 Flash microservice, using EF Core and PostgreSQL.
- Designed a Redis/Celery pipeline processing PDFs, DOCX, and TXT through 4 asynchronous stages, with real-time SSE progress and AI-generated summaries streamed to React.

Khan's Blog Platform - [GitHub | Live*] | *Java, Spring Boot, React, TypeScript, PostgreSQL, AWS, GitHub Actions*

- Deployed a full-stack blog platform on AWS using Elastic Beanstalk, RDS PostgreSQL, S3, and CloudFront, routing API traffic through CloudFront as a reverse proxy for unified HTTPS delivery.
- Implemented JWT authentication with Admin/User RBAC and resource-level permissions, alongside a React frontend with search, filtering, and real-time notifications across 10+ REST endpoints
- Automated frontend and backend deployments with 2 GitHub Actions CI/CD pipelines, reducing manual deployment time by 15 minutes per release.

Gmail Job Monitor – [GitHub]**|** *Python, SQLite, Gmail API, OAuth2, Typer, Rich*

- Built a local-only CLI tool that authenticates with Gmail via OAuth2 and scans 5,000+ emails across 2 accounts to classify job-related activity into 6 categories including offers, interviews, rejections, and recruiter outreach
- Implemented a 3-tier classification system — sender-domain overrides, subject-line signal matching, and weighted keyword scoring — to accurately handle mixed-use domains like LinkedIn and Indeed
- Packaged as a globally installable CLI with SQLite persistence, configurable report export, and a live inbox watcher polling every 60 seconds for real-time new email detection

EXPERIENCE

University of Windsor| Windsor, ON, Canada **Apr. 2023 – Nov. 2024**
Research Assistant

- Engineered an image segmentation pipeline from scratch using KMeans clustering and Euclidean distance calculations to partition images into superpixel regions with configurable overlap.
- Reconstructed a hybrid CNN+GNN architecture from published research, constructing SLIC-based superpixel graphs and a coupled model for image classification.
- Implemented and benchmarked CNN (TensorFlow/sklearn) and GCN (PyTorch Geometric) models, achieving 98% on MNIST and 81% on Cora, comparing classification accuracy across architectures.

University of Windsor| Windsor, ON, Canada **Sep. 2022 – Apr. 2024**
Teaching Assistant

- Assisted 100+ students through code reviews and debugging sessions across Data Structures, OOP, and Database Management Systems.
- Led weekly lab sessions for 30+ students on Java, data structures, and algorithms, while grading 25+ weekly assignments and exams.