Mohammed Asrar Ali

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EDUCATION

Lakehead University   Thunder Bay, ON
Honours B.Sc. in Computer Science (AI & Web Development), GPA: 3.7/4.0   *Expected Apr. 2027*

- Dean's List; Tamblyn Merit Scholarship
- Relevant coursework: Data Structures & Algorithms, OOP, Database Management, Machine Learning, Computer Organization, Linear Algebra, Statistics

EXPERIENCE

Software Developer Co-op   Jan. 2026 – Present
Trend Micro   *Ottawa, ON*

- Built features for the Workload Security (C1WS) platform using Java; integrated CI/CD with Jenkins and validated workloads on AWS EC2
- Ported C1WS agent support to SUSE Linux 16; updated deployment scripts, OS mappings, UI metadata, and versioning pages
- Delivered an AI-assisted Python customer report in 3 days by aggregating C1WS data; helped secure an enterprise deal and moved toward productization

Software Engineering Intern   May 2024 – Aug. 2024
Maintair Aviation   *Thunder Bay, ON*

- Built and deployed a full-stack flight-schedule manager (Flask, React) on Azure App Service, replacing spreadsheets and reducing scheduling errors by 40%
- Designed flight scheduling tables in Azure SQL Database and stored static assets in Blob Storage; automated weekly reporting for stakeholders
- Implemented REST APIs secured with Managed Identities and instrumented Application Insights metrics/alerts to support reliability and troubleshooting

Volunteer Teaching Assistant   May 2023 – Present
Code4kids   *Remote, Canada*

- Support weekly Python and web-development sessions for 30+ learners and help deliver project-based curriculum and debugging assistance

PROJECTS

System Design Interview Assistant | *Python, RAG, BM25, Embeddings, ChromaDB*   Nov 2025 - Jan 2026

- Built a RAG system indexing 11K+ chunks with hybrid retrieval (BM25 + semantic vectors), achieving 79% recall at sub-100ms latency
- Implemented Reciprocal Rank Fusion and automated Precision@K/Recall@K evaluation; generated grounded answers with inline citations via Groq API

Pneumonia Detection | *Python, PyTorch, Flask, Docker, Azure App Service*   Jan. 2025 – Feb. 2025

- Trained a CNN on 5,000 chest X-ray images to detect pneumonia (AUC 0.91) and validated results using clean evaluation splits
- Containerized the model behind a Flask REST API and deployed to Azure App Service for inference

BreezyWeather | *JavaScript, React, REST APIs*   Nov. 2023

- Developed a responsive single-page app consuming the OpenWeather API with caching to reduce repeat calls and improve performance
- Added input validation and a mobile-first UI for reliable searches and clean UX on small screens

TECHNICAL SKILLS

Languages: Java, Python, JavaScript, C/C++, SQL
Frameworks: Flask, React
Tools & Cloud: Git/GitHub, Docker, Linux, Jenkins, Azure (App Service, Azure SQL, Blob Storage), AWS EC2, Application Insights, REST APIs