

Mohammad Waliduddin

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Education

York University

Bachelor of Engineering in Software Engineering, Specialized Honours

Toronto, Ontario

Sept. 2022 – Expected Dec. 2027

- Coursework: Data Structures and Algorithms, Object-Oriented Programming, Software Design, Databases, Software Testing, Operating Systems

Experience

Software Developer Co-op

Ontario Government

Sept. 2025 – Present

Toronto, Ontario

- Built enterprise AI workflows with **AutoGen** and **LangGraph**, orchestrating agents for issue analysis, repository-context hydration, implementation, test generation, and review.
- Designed task-aware **model routing** across commercial and open-source LLMs using task type, context size, quality, latency, and cost; applied **RepoMix**, **Ponytail**, and **Caveman** to reduce token usage.
- Integrated **MCP servers**, structured tool calling, REST APIs, SQL services, and developer tools into long-running agent workflows; containerized services and pipelines with **Docker on WSL**.
- Implemented persistent vector-backed memory for multimodal healthcare context and used **Langfuse** to trace agent decisions, tool calls, failures, latency, and token consumption.

Software Developer Co-op

CIBC – Canadian Imperial Bank of Commerce

Sept. 2024 – Dec. 2024

Toronto, Ontario

- Built a Java, SQL, and Jenkins automation pipeline for 8 weekly finance reports, cutting **15+ hours/week** of manual querying for 20+ analysts in a regulated environment.
- Reviewed customer-record schema changes affecting consent, permissions, and access-control logic for **4,000+ frontline staff**, documenting edge cases and release risks.
- Worked across the SDLC with developers, QA, and analysts to translate stakeholder rules into technical specifications, defect notes, validation checks, and production-ready releases.

Projects

CLAI Agentic Developer Platform | *Python, LangGraph, AutoGen, MCP, Langfuse, Docker*

[Live Link](#)

- Built an end-to-end agent platform connecting LLMs to repositories, databases, APIs, documents, and MCP-compatible tools through persistent state, structured outputs, embeddings, and grounded retrieval.
- Implemented multi-agent execution, model routing, tool validation, context compression, and evaluation traces for groundedness, tool success, workflow completion, latency, and cost.

REAI Real Estate Predictor | *Python, XGBoost, Optuna, Flask, Docker, GCP, Pub/Sub*

[Live Link](#)

- Trained an Optuna-tuned XGBoost model ($R^2 = 0.91$) on **50K+ Canadian listings** and deployed it behind a Dockerized, rate-limited Flask API with event-driven prediction workflows.

Skills

Languages: Python, Java, SQL, TypeScript, JavaScript, Bash

AI Engineering: LangGraph, AutoGen, MCP, RAG, embeddings, tool calling, structured outputs, prompt/context engineering

Models & Evaluation: OpenAI, Anthropic, Gemini, Llama, Qwen, Mistral, Langfuse, model routing, LLM evaluation

Data & Backend: PostgreSQL, Redis, Neo4j, vector databases, REST APIs, Flask, Spring Boot

Cloud & DevOps: Docker, Kubernetes, WSL, GCP, AWS, Jenkins, GitHub Actions, Git