Marium Ashraf

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EDUCATION

B.Eng in Computer Engineering (Major in Software Engineering)**,** Toronto Metropolitan University Graduating **April 2027**

TECHNICAL SKILLS

Languages: Python (FastAPI, Flask, pandas, scikit-learn), Java (Spring Boot), JavaScript/TypeScript (React/Node), C, Ruby, R

AI & LLMs: GPT-4o, RAG, embeddings, ChromaDB, prompt engineering, MLflow, experiment tracking

Databases: PostgreSQL, SQL, MongoDB, NoSQL, BigQuery, vector DBs

APIs & Integration: REST, gRPC, Slack API, microservices, RabbitMQ, Docker

Cloud & DevOps: AWS, GCP (Airflow/Dataflow/PubSub), CI/CD, GitHub Actions, Linux

Data Engineering: ETL/ELT, modeling, streaming, feature engineering, analytics pipelines

Testing & QA: Jest/RTL, PyTest, automated suites, observability, load testing

Other: MLOps, NLP, distributed systems, scalability, Agile/Scrum

RELEVANT EXPERIENCE

Operations & AI Intern, Lyrata *July 2025 – Present*

- Designed GPT SOP data pipeline and RAG Q&A engine (Python, Flask, PostgreSQL, ChromaDB, GPT-4o) that ingests PDF/DOCX/XLSX SOPs into normalized SQL schemas and a vector acked knowledge base; reduced SOP lookup time by ~90% and projected ~$56K/year in labour savings for a 10-person greenhouse team.
- Built LyrataGPT, an assistant that delivers cited, procedure accurate answers to technician questions about equipment, schedules, and workflows; cut onboarding ramp time by ~50% and halved routine supervisor interventions across daily farm operations.
- Applied Vector Institute's DaRMoD methodologies—including data readiness, feature engineering, NLP/LLMs, experiment tracking, and MLOps—to harden Lyrata's AI systems, implementing reproducible MLflow evaluations (regex vs RAG vs hybrid extraction), containerized REST endpoints, scalable routing, and fault-tolerant deployment patterns for production use.
- Engineered automation across Slack and Google Sheets (Slack API, Zapier/Apps Script, PostgreSQL), implementing schema design, validation, idempotent handlers, and failure-recovery logging; centralized Slack logs, Excel records, and sensor exports into a unified reporting stack, eliminating manual reconciliation and improving data accuracy and completeness by ~40%.

Prompt & AI Engineer, Outlier *Nov 2022 – Jul 2025*

- Developed over 100 microservice style LLM pipelines with automated rubric scoring and anomaly detection, scaling evaluation workflows to millions of daily queries and boosting models by 35%.
- Created a centralized SQL-backed analytics platform with real-time dashboards and automated monitoring, shrinking debugging cycles by 60% and accelerating production deployments.
- Led architectural refactors of distributed inference infrastructure, optimizing container orchestration, load balancing, and caching mechanisms to improve latency and reliability under heavy production.
- Translated business level objectives into technical specs for cross-functional teams, introducing standardized workflows that accelerated feature delivery timelines by 30% improved adoption.

Web Developer, While She is True Jan 2022 – Dec 2023

- Built a Stripe integrated payment platform and secure classroom portal, implementing backend authentication and SQL workflows that improved payment success rates and system reliability by 40%.
- Resolved complex async rendering and hydration failures in React dashboards, using performance profiling and targeted optimizations to raise uptime by 35% and improve user experience.
- Implemented automated QA pipelines with 25+ Jest/RTL tests covering critical APIs and data flows, reducing regression risk by 50% and enabling faster, safer release cycles.
- Managed full lifecycle deployment of client facing applications, including system hardening, CI/CD pipelines, and secure authentication workflows, resulting in highly available production environments