

Marium Ashraf

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EDUCATION

Bachelor of Computer Engineering, Toronto Metropolitan University

Major in Software Engineering

Cumulative GPA: 2.01

Relevant Coursework: Advanced Algorithms, Database Systems I, Operating Systems, Software Project Management, Software Design & Architecture, Object-Oriented Analysis & Design, Computer Organization & Architecture, Software Requirements Analysis & Specification, Probability & Stochastic Processes, Microprocessors, Digital Logic

TECHNICAL SKILLS

Languages & Scripting: Python (advanced), JavaScript (ES6+), TypeScript, SQL (PostgreSQL, MongoDB), Bash

Frameworks & Libraries: React, Node.js, Flask, Express, REST APIs, Tailwind, Material UI, Postman

AI & Data Tools: Pandas, NumPy, scikit-learn, matplotlib, LLM prompt design & evaluation, A/B Testing, Output Scoring, Data QA Pipelines

Testing & Automation: Jest, React Testing Library, Python unittest, Automated Test Hooks, GitHub Actions, CI/CD Pipelines

DevOps & Infrastructure: Docker, Kubernetes (basic familiarity), Terraform (basic use), Ansible (light experience), AWS Lambda, AWS Lex, Jenkins, Git (advanced use in multi-branch PRs, tagging, merge strategy)

Version Control & Collaboration: GitHub Projects, GitHub PR Reviews, Jira, Agile/Scrum Methodologies

Systems & Platforms: Linux/Unix CLI, VS Code, Figma, Railway, Netlify, Render, Vercel

RELEVANT EXPERIENCE

Technical Projects, Toronto - Software Engineer

Sept 2021 - Present

- Built a high throughput simulation tool in React + D3.js, processing 100K+ DOM ops/session with <100ms latency by optimizing component lifecycle logic, modular state management, and custom rendering hooks
- Engineered a Financial Analytics Dashboard with MERN + ML stack, implementing RESTful APIs, backend prediction logic, and interactive charting that improved forecast accuracy by 40%
- Developed 30+ unit and regression tests for both frontend and backend using Jest (React) and Mocha/Chai (Node.js), contributing to >90% test coverage and reducing prod defects by 25%
- Launched containerized cybersecurity labs using Bash + Docker Compose, replicating CVEs (auth bypass, privilege escalation); delivered reusable, modular labs for hands on red teaming education
- Designed and deployed a serverless robo advisor with AWS Lambda + Lex, modeling decision flows after fintech logic, securing endpoints with token-based auth and real-time encrypted user profiling
- Contributed to Git workflows with feature branching, lint/test gatekeeping, and team reviewed PRs, emulating real world CI/CD pipelines and promoting versioned, test driven development

Web Developer Intern, Toronto - While She is True

Jan 2024-Apr 2025

- Engineered and deployed a production grade donation portal using React, TypeScript, and PostgreSQL, integrating Stripe API, semantic HTML, and custom ETL validation pipelines; ensured WCAG 2.1 compliance to support inclusive fundraising for BIPOC tech education
- Architected a secure, modular digital classroom backed by MongoDB and role-based access control, applying guarded React route logic and scalable component design to emulate enterprise grade auth workflows
- Authored 25+ robust unit and integration tests using Jest and React Testing Library, covering critical logic for payment processing, access control, and navigation, achieving 90%+ test coverage and streamlining test automation
- Diagnosed and resolved production-critical bugs such as async race conditions, component re render traps, and schema mismatches, enhancing system reliability and reducing reported UI issues by over 30%
- Led Git based CI/CD operations, orchestrating version-controlled workflows with GitHub Projects, Actions, and peer reviewed PRs, ensuring smooth deployments, regression-free releases, and tagged versioning

Prompt and AI Engineer, Toronto - Outlier

Nov 2023-Mar 2025

- Designed and QA'd 100+ production-grade LLM prompts for OpenAI and Hugging Face APIs across policy, education, and financial agent use cases, enabling structured, real time AI reasoning in live user environments
- Built automated pipelines in Python (pandas, matplotlib) to track and score hallucinations, sentiment drift, and intent accuracy across 10K+ LLM outputs, contributing to a 25% increase in prompt reliability
- Implemented a Git-based A/B testing framework, introducing reproducible experiment tracking, version-controlled prompt lifecycles, and rubric-backed evaluation for fast iteration and scalable deployment
- Developed Python unit tests and custom scoring harnesses to validate agent behavior under edge cases, injection vectors, and fallback scenarios, helping align with compliance, safety, and user trust benchmarks
- Collaborate cross functionally with engineers and product teams to integrate prompts into broader AI systems, addressing complex user intent modeling and prompt injection mitigation strategies in high stakes contexts

Computer Science and Math Tutor, Toronto—Freelance

Sept 2021 – Present

- Mentored 40+ students in Python, Scala, DSA, and Operating Systems fundamentals; used real-world examples (login/auth flows, REST APIs, SQL injection) to teach debugging, modularity, and recursive logic
- Delivered SAT and advanced math (Functions, Calculus, Probability) support while managing curriculum, client scheduling, and progress reviews, demonstrating agile thinking and learner first communication