

# MUHAMMAD IBRAHIM

Software Engineer

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## EDUCATION

### Queen's University

Bachelor of Science (Honours) Specializing in Software Design (SODE)

Graduation Date: May 2024

Kingston, ON

## EXPERIENCE

### Software Engineer

Namakina (startup)

April 2025 - Present

Portsmouth, NH

- Developed an AI agent using context engineering cutting CAC 70% while sustaining 30% CTR and 20% engagement
- Implemented dynamic caching and token efficiency tactics like just-in-time retrieval, deduping, and short snippets which reduced token usage 80% and model latency 75% while minimizing context rot
- Designed dynamic system prompts that adapt to user intent and state, with dynamic tool-calling based on interactions
- Defined backend architecture enabling scalable AI data pipelines and dynamic user profiling across future products
- Optimized model selection by choosing models based on strengths like cost, latency, and reasoning for reliable outcomes

### Software Engineer Intern

Screencrib (startup)

Jun 2023 - Jan 2024

Remote

- Built script analysis tool using Python, LangChain, Spacy, and NLP models, helping filmmakers budget projects 70% faster
- Led MVP definition and development with CEO and CTO for Y Combinator application
- Integrated Sendgrid, DatoCMS, Retool, Vercel, DocuSign, and AWS to streamline product delivery
- Employed a JavaScript and TypeScript stack for web development, utilizing modules like Node.js and Chakra.ui

### Teaching Assistant

Queens University Department of Computing

Sep 2022 - Dec 2022

Remote

- Held weekly office hours and graded Python assignments for 200 students, providing detailed feedback on logical semantics
- Mentored students on term-long logic programming projects, guiding both conceptual design and technical implementation

### Infrastructure and Networking Intern

MITRE Corp

May 2022 - Aug 2022

Bedford, MA

- Developed a Python network analysis tool using NetworkX and Grafana to evaluate performance of LEO satellite systems
- Analyzed packet latency, throughput, and bottlenecks and improved identification of high-traffic nodes by 30%
- Used PuTTY and network emulators to run simulations and log performance data for post-analysis
- Presented findings to senior researchers with metric-driven recommendations that improved flow efficiency in simulations

## PROJECTS & LEADERSHIP ACTIVITIES

### Research Volunteer

St. Michael's Hospital

Sep 2024 - Sep 2025

Toronto, ON

- Visualized MRI segmentation results using Matplotlib for detailed analysis, improving understanding of model performance
- Documented research pipelines using Jupyter Notebooks ensuring scalability and ease of collaboration across research teams
- Worked with 2 students and 1 supervisor to study correlations between tumor size and eye occlusions for clinical insights

### 4th Year Capstone Project

Neuma Centre for Social Wellness

Sep 2023 - Apr 2024

Kingston, ON

- Built an AI RAG chatbot to collect and analyze high-quality data from hallucinogenic substance users for research teams
- Developed a lightweight Flask and SQLite backend achieving sub-300 ms response times
- Architected a React frontend from Figma designs using agile collaboration with the client

### Edge of Lyme 2023 Hackathon

3rd Place Award Winner

Sep 2023

Kingston, ON

- Designed and presented an app solution for the Ontario Lyme Disease epidemic that allows residents to test for Lyme on the go
- Created a presentation to show our project definition, market analysis, solution and technology, and project plan
- Developed a high-fidelity Figma prototype to simulate the workflow of our solution

### President

QWave - Queen's Music Production Club

Aug 2022 - Apr 2024

Kingston, ON

- Acquired and distributed club funding and resources of over \$9,000 for equipment and hosting large events
- Built and managed semi-professional recording studio on campus for over 10,000 students to use

## TECHNICAL SKILLS

**Languages:** Python, JavaScript, TypeScript, Java, SQL, Bash, HTML, CSS

**Technologies:** React, Node.js, Flask, LangChain, PostgreSQL, MySQL, Redis, AWS, Vercel, Supabase

**Developer Tools:** Git, GitHub, GitHub Actions, Docker, VSCode, Cursor, Claude Code, OpenAI Codex, n8n, Figma, Linux

**Certifications:** AWS Cloud Practitioner, Health Canada GCP, Health Canada Division 5, TCPS 2, Palantir Foundry Aware