

ANEEQ HASSAN

647-741-8500 | hassan.aneeq01@gmail.com | in/in/HassanA01 | github.com/HassanA01 | aneeqhassan.com

Education

University of Toronto

Honours Bachelor of Science in Computer Science

September 2019 – April 2025

Experience

Dayforce

AI Software Engineer

September 2025 – Present

Toronto, ON

- Developed QueryGPT, an SQL Agent capable of generating accurate queries from natural language prompts across a database of over **5000** tables, reducing manual report generation time from 10 hours to under **3 minutes** for over 1000 annual reports
- Developed a **Playwright MCP Agent** that translates natural-language instructions into automated browser workflows, allowing teams to validate client configuration logic without manual test scripting reducing human validation time by **100%**
- Implemented server-side request validation using **Pydantic** models in **FastAPI**, enforcing strict schema checks and preventing malformed or malicious payloads from reaching internal services

Magnet Forensics

Software Engineer Intern

January 2025 – April 2025

Toronto, ON

- Developed Fastrak using C# (.NET stack) to offload data acquisition from GrayKey to standard PCs, reducing GrayKey usage per phone by **85%**, enabling simultaneous extractions, and significantly improving the efficiency of a **\$60k** tool
- Implemented a modular acquisition workflow using **dependency injection**, improving testability and allowing new device-handler modules to be added with minimal code changes
- Built a **factory-pattern** device selector to automatically choose the correct acquisition workflow per phone model

Annaly

Software Engineer Intern

February 2024 – August 2024

Toronto, ON

- Designed and implemented an **ETL Notifier System** using C#, .NET, VCron, and SQL Server, monitoring data arrivals from over **30 vendors** and reducing incident response time by **95%**
- Migrated **24** margin calculation applications from Microsoft Interop to ClosedXML, cutting execution time by **50%** and reducing server **CPU usage by 40%**
- Built an email logging system using **Mailgun API** and SQL Server that tracks **10,000+** monthly communications, reducing audit lookup time by **75%**
- Created an automated SQL report that emails weekly system exceptions to teams, replacing daily manual checks and saving **40** hours monthly.

Enbridge

Data Analyst Intern

June 2023 – September 2023

Toronto, ON

- Developed a project management tool using Microsoft Power Apps, enabling over **10 teammates** to seamlessly report and track progress updates, which resulted in a **75%** increase in inter-departmental communication efficiency.

Koho

Software Engineer Intern

May 2022 – May 2023

Toronto, ON

- Engineered **integration tests** using **Go** that validates user registration flows, integrating with **Jenkins** pipeline to catch bugs before deployment and reducing QA time by **45%**
- Implemented an **internal tool** into the **Jenkins** pipeline using **Go** and **SQL** for the Save Accounts feature, implementing automated testing scripts that accelerated development cycles by **45%**.
- Integrated **Google Pay API** into Koho's mobile app, driving **40%** adoption among Android users and processing **\$2M** in transactions within first quarter of launch

University of Toronto

Teaching Assistant

January 2022 – May 2025

Mississauga, ON

- Instructed over **2,000** students across **6** semesters in **data structures, algorithms, OOP**, and complexity using **Python** in an active learning environment
- Led weekly labs for **5** sections, improving average grades by **47%** by creating lesson outlines and aiding students

Projects

SemantiCache | Typescript, Grafana, Prometheus, Redis, Docker, OpenAI API, Express

January 2026

- Built a semantic caching system that reduces LLM API costs by **35%** using vector similarity search with HNSW indexes, supporting multiple embedding providers (OpenAI, HuggingFace) and vector databases (Redis, FAISS, pgvector) swappable via configuration
- Implemented request batching and two-stage retrieval with cross-encoder reranking to achieve sub-5ms query latency, with Grafana dashboards tracking cache performance and cost savings in real-time

Technical Skills

Languages: Python, Java, Go, C, C#, C++, HTML/CSS, JavaScript, TypeScript, SQL

Tools: Cursor, Co-Pilot, Git, Linux, Docker, Kubernetes, Firebase, Postman, Datadog, Jira, Redis, MongoDB, SQL Server

Frameworks: React, Node.js, Express.js, Angular, .NET, TensorFlow, JQuery, FastAPI, TailwindCSS, Django, Next.js

Concepts: Software Engineering, Database Design, Cloud, Scrum/Agile, Machine Learning, Web Development