Ismail Ahmed

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EDUCATION

University of Toronto   Sep. 2020 – May. 2026
*Honours Bachelor of Science in **Computer Science***
- Director UofT AI: Organized AI events with industry experts

Relevant Coursework:
Database Systems, Operating Systems, Software Engineering, Web Systems & Security, Machine Learning, Deep Learning

EXPERIENCE

Machine Learning Developer Intern   Jan. 2025 – Apr. 2025
Casaya
- Led design and development of a full-stack **AI-powered rental platform**, covering listing management, tenant screening, lease generation, and rent collection workflows.
- Integrated third-party APIs for **identity, income, and background verification**, automating tenant screening and reducing manual review time by **70%**.

Software Developer   Jan. 2024 – Dec. 2024
Lifomation
- Developed an advanced AI-powered document management web application using **RAG** with **FAISS** and **OpenAI Embeddings**, enabling semantic search, deadline-based retrieval, and contextual recommendations.
- Translated feedback from over **1,000 beta users** into robust security features, aligning **technical design** with business needs and positioning Lifomation as a **privacy-first AI solution**, leading to an interview with **Sequoia Capital**.

Software Developer, Contributor   Sep. 2024 – Dec. 2024
LangChain-AI (via University of Toronto)
- Developed an optimized **Dropbox Document Loader** using **TypeScript** and **Node.js**, integrating into **LangChain's AI-driven document pipeline** to streamline document retrieval and processing, handling **10,000+ files** efficiently.

Special programs:Lead   Jan. 2023 – Aug. 2023
University of Toronto
- Developed a web application for the WUSC Student Refugee Program, streamlining information access and improving onboarding for sponsored students.
- Served as **President of the Local Committee**, leading initiatives to support student integration, organizing campus events, and coordinating with national WUSC representatives.

Software Engineer Intern   May. 2022 – Aug. 2022
Maple Bit Services
- Optimized the POS payment system using Python (FastAPI), C++ (gRPC), and PostgreSQL, achieving 35% faster transactions by implementing asynchronous processing, caching, and advanced query optimization
- Built a distributed Redis caching layer with sharding and partitioning, significantly improving database scalability and reducing load under peak traffic conditions.

Machine Learning Researcher   Jan. 2025 – May. 2025
University Toronto
- Trained CGANs, WGANs and DDM-CGAN to generate financial time-series data, capturing tail risks with 98% precision
- Improved portfolio risk modeling by 25% via Monte Carlo default risk models; tested via Frobenius norm QQ

PROJECTS | View All ↗*

pintos | *C, C++, x86 Assembly*
- Enhanced thread scheduling and implemented **synchronization primitive** for kernel-level multitasking on CPU.
- Built a virtual memory system with paging, **stack growth**, and memory-mapped files to optimize memory usage.
- Engineered a swap table utilizing the **clock algorithm** for efficient **frame eviction**, achieving a flawless 100% score.

SKILLS

Languages: Python, JavaScript (TypeScript), C++, Java, R, Bash, Haskell, HTML/CSS
Frameworks: Flask, FastAPI, Django, React, Node.js, Express.js, .NET, Angular, LangChain, FAISS, TensorRT
Cloud & DevOps: AWS, GCP, Azure, Docker, Kubernetes, OpenShift, Jenkins, GitHub Actions
Databases: SQL, Firebase, MongoDB, SQLite, DynamoDB, Neo4j, PostgreSQL, Supabase