

Khashayar Azad

(514) 691-2924 | khashzd@gmail.com | linkedin.com/in/khashazad

EXPERIENCE

Teaching Assistant

Sep 2025 – Present

University of Toronto

Toronto, Canada

- CSC309H1 (Programming on the Web): lead tutorials and assist students with assignments and projects.
- CSC343H1 (Introduction to Databases): invigilate midterm exams, grade assignments, midterms, and final exams.

Research Assistant

Jan 2021 – Feb 2026

McGill University – Cardille Lab (Remote)

Montreal, Canada

- Developed a benchmark dataset and framework to assess the geospatial reasoning capabilities of Large Language Models.
- Implemented a probabilistic time-series model that integrates noisy land-cover classifications into a temporally consistent posterior estimate with quantified uncertainty.
- Designed and optimized an Extended Kalman Filter for spatiotemporal modeling of satellite imagery, using gradient-based parameter optimization to improve generalization across diverse geographies.
- Built a large-scale data processing pipeline, enabling the extraction and spatial aggregation of lake carbon content and related environmental variables at a global scale.

Full-Stack Software Developer Intern

Sep 2022 – Apr 2024

Genetec

Montreal, Canada

- Contributed to the development of a cloud-based SaaS platform using Microsoft's technology stack, implementing front-end features in Angular and back-end microservices with .NET Core.
- Led the migration of an active microservice database to MongoDB, optimizing indexing to improve performance.

EDUCATION

University of Toronto

Expected Dec 2026

Master of Science in Applied Computing – AI Concentration

Toronto, Canada

- **Courses (ongoing):** Neural Networks and Deep Learning, Healthcare and Medicine Basics for AI Experts, Vector Databases and Unstructured Data Query Processing, Deep Learning: Theory and Data Science.

Concordia University

Sep 2021 - Jun 2025

Bachelor of Engineering, Software Engineering | GPA: 4.18/4.3

Montreal, Canada

- **Courses:** Machine Learning, Data Structures and Algorithms, Computer Networks.

PROJECTS

Episodic Memory for LLM Agent

- Episodic memory for an LLM-based Minecraft agent, retrieving past interaction episodes to inform multi-step decisions.
- Embedding-based similarity retrieval with temporal indexing, integrated into the LLM reasoning loop with improvements over baseline RAG on multi-step tasks.

Multimodal Relapse Prediction

- Multimodal deep learning framework fusing temporal clinical sequences for patient relapse prediction.
- Transformer-based feature extraction with cross-modal fusion, evaluated against clinical baselines.

PUBLICATIONS

The Cloud-Based Geospatial Benchmark: Challenges and LLM Evaluation

TerraBytes – ICML Workshop, 2025

Spatial and Temporal Availability of Cloud-free Optical Observations in the Tropics

Scientific Data, 2023

SKILLS

Programming Languages: Python, TypeScript, C++, SQL, C#

Frameworks & Tools: PyTorch, Google Earth Engine, CUDA, FastAPI, React/Next.js, Node.js

Data & Systems: PostgreSQL, MongoDB, Docker, Git, Linux, Cloud Deployment

Core Expertise: Deep Learning, Model Optimization, Algorithm Design, Full-Stack Development

Spoken Languages: English (Fluent), Persian (Native), French (Intermediate)