

# MUNIM ADIL

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## Education

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**HBSc in Computer Science, Geographical Information Systems**

**Expected graduation: Jun. 2026**

University of Toronto, Canada

Recipient of the **University of Toronto Student Engagement Award**

**Completed Coursework:** Systems Programming, Databases, Algorithm Analysis, Software Design, Computational Theory, Data Structures, Web Development, Software Engineering, Spatial Data Science

## Technical Skills

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**Languages:** C/C++, Python, Java, JavaScript, HTML/CSS, SQL

**Developer Tools:** Bash, lldb, Make, cron, Vim, Git/Github, Postgres, Postman, Docker, Linux, Figma, Vercel, DigitalOcean

**Frameworks:** Next.js, FastAPI, Django, Flask, Express.js, Node.js, Vue.js, Cypress

**Libraries:** HuggingFace, C++ STL, React, OpenLayers, Leaflet, GDAL, Apexcharts

## Experience

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**Computer Science Teaching Assistant | University of Toronto**

**Sep. 2024 – Dec. 2024**

Java, Python, HTML/CSS, MongoDB, Express, React, Node.js, Git

- Supported instruction and grading for **CSC207: Software Design**, emphasizing software engineering principles and object-oriented design using Java.
- Delivered engaging tutorials for **CSC309: Programming on the Web**, focusing on full-stack web development.
- Selected as **Head TA** during peak periods, leading labs, grading assignments, and **managing a team of 20+ TAs**.
- Enhanced student performance through personalized support and detailed feedback.

**Software Developer Co-op | Environment and Climate Change Canada**

**May 2023 – Aug. 2024**

Python, HTML/CSS, Vue.js, Linux, Cypress, Postman, Docker, Flask, AMQP, Quasar, Git

- Developed **100+ real-time weather layers** and several forecast models for MSC GeoMet, one of the world's largest public Web Map Services.
- Spearheaded the integration of AI-powered forecast models into public services, improving workflow accuracy and efficiency by **50%**.
- Optimized performance in distributed systems, reducing validation time by **70%**.
- Independently built an interactive, cross-browser compatible UI, accelerating data collection by **75%** from complex, multidimensional datasets; earned a **perfect performance evaluation** record from supervisors

**Full Stack Developer | University of Toronto Research Opportunity Program**

**Dec. 2022 – Aug. 2023**

TypeScript, MongoDB, Express, React, Node.js, DigitalOcean, Python, Git

- Accelerated data collection processes by **80%** through code optimization and modern tool integration, significantly improving data accuracy and enabling richer dataset creation.
- Promoted from Research Student to Research Assistant within 3 months for strong performance, demonstrated leadership and mentoring new team members.

## Projects

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**[SpeakWrite: AI-Powered Conversational Text-Editing Agent](#) | Next, FastAPI, HF, PostgreSQL, WebSockets**

- Spearheading the development of a **scalable, web-hosted AI agent** with a **microservices-based architecture** using REST and WebSocket APIs, enabling intelligent, real-time conversational text editing.
- Leading a **team of 7 software engineering students**, utilizing **Scrum methodology** to oversee sprints, manage project timelines, and drive execution through communicating strategic high-level architectural and deployment decisions
- Designing and optimizing **prompt engineering strategies**, fine-tuning model behaviour to improve text coherence, accuracy and response efficiency

**[luna.sh: Unix Shell](#) | C++, lldb, CLI, Make, conda, Git**

- Built a **custom Unix shell** in C++, supporting core commands (cd, pwd, ls, rm, mv) with flag options and command history navigation.
- Implemented **memory-efficient object-oriented design** with custom test suites.
- Currently implementing advanced features like **process management, multi-threading, and command piping**.

*References to be furnished upon request*