

# Mekaeel Malik

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## Education

### McMaster University

Hamilton, ON

Pursuing a Bachelor of Computer Science, Minor in Innovation. MES Council Representative

Sept. 2024 – present

- Key Courses: Software Development, Data Structures & Algorithms, Web Development, Logical Reasoning

## Experience

### Software Engineer Intern/Coop

May 2025 – August 2025

TD Bank Canada

Hybrid / Toronto, ON

- Delivered a scalable solution for on-demand event processing, addressing high-volume authentication needs (**100,000+ monthly requests**) by developing and deploying **RESTful API** using Spring Framework.
- Realized a **50% reduction in API load time** by identifying API bottlenecks and implementing **pre-caching** for overlapping data using Spring Data.
- Collaborated with senior team members to reduce data overload through **database normalization** cutting **database size by 10%+** and reducing **API response size by 5%**.
- Assisted with development of API adapter to **reduce unnecessary sub-calls by 60%** through consolidation.

### Undergraduate Research Assistant

August 2025 – Present

McMaster University

Hamilton, ON

- Collaborated with faculty and research team to design machine learning models **predicting NBA player injury risk**, generating **actionable insights** for performance and risk management.
- Collected datasets from web and API sources using **Selenium** and Beautiful Soup. Cleaned and **merged datasets using SQL** to build analysis-ready tables.
- Trained and evaluated Scikit-learn models on **10,000+ NBA game logs and injury reports** using Python to identify player health and injury trends.
- Contributed to **forthcoming research publication** by documenting methodology, experimental results, and recommendations for broader applications of predictive analytics.

### Software Developer - Summer Intern

July 2024 – August 2024

Infinite Investment Systems

Toronto, ON

- Created **browser-based testing of internal sites** using Selenium increasing test coverage by 30%.
- Wrote integration tests for API endpoints utilizing **Requests library** to decreasing runtime by 10ms.
- Met internal testing needs by creating testing data using Faker and Pandas to **generate 50+ GBs of data**.

### Database Administrator

June 2022 – Sept. 2022

Penny Appeal Canada

Mississauga, ON

- Managed **data migration** into CRM system, automating through UiPath **Robotic Process Automation**
- Contributed to website campaigns developing **front-end development** skills using HTML/CSS

## Projects

### RapidReport | Accessibility Report Assistant | Cohere, Google API, Next.js, TypeScript, Tailwind

DeltaHacks 2025

- Developed **accessibility reporting web application** allowing users to document infrastructure issues through image uploads with AI-generated professional emails to businesses and government entities.
- Built frontend using **Next.js and Tailwind CSS** with screen reader compatibility and optimized color contrast for users with diverse accessibility needs.
- Utilized Google Geocode API to **automatically identify and route reports to nearest relevant recipients**.
- Integrated Cohere AI NLP to **generate professional emails** from uploaded images and text prompts.

### Plant Pals | IoT Plant Monitor | Arduino, HTML, CSS, JavaScript

Hack The North 2022

- Collaborated to build **IoT plant monitoring system** integrating Arduino sensors with web dashboard.
- Resolved hardware compatibility issues through **adaptive problem-solving** developing my Arduino skills

## Technical Skills

**Languages:** Python, Java, C, PostgreSQL, JavaScript, TypeScript, HTML/CSS

**Developer Tools:** Git, VS Code, Cursor, GitHub, Visual Studio, PyCharm, JIRA, Jupyter Notebook

**Libraries:** Pandas, NumPy, Matplotlib, Selenium, Dask, Beautiful Soup, Faker, Requests, Spring Framework, React