

Kazi Takia Talha

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EDUCATION

University of Toronto Mississauga

2022 - 2027

Honors in Bachelor's of Science (H.Bsc.), Computer Science & Mathematics + (PEY Co-op)

Relevant courses: Introduction to Computer Science(Python), Software Design(Java), Computer Organization(RISC-V), Introduction to Machine Learning, Data Structures & Algorithms, Neural Networks and Deep Learning, Operating systems

TECHNICAL SKILLS

- Programming: C++, C, Python, Java, RISC-V Assembly, HTML, CSS, JavaScript,
 - Frameworks & Others: JavaFX, Sklearn , PyTorch, Git, Github, GitLab, Notion, Microsoft, Bash Scripting, React, Next
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EXPERIENCE

Software Developer, The Hospital for Sick Children

Jan 2024 - Present

- Developing an algorithm on the website that can process daily sensor data from the participants to automatically determine hours of wear
- Building on the existing website by adding advanced data analysis features, allowing researchers to efficiently track and monitor participant data,

ML Developer, The Human Feedback Foundation (The Linux Foundation)

Jan 2024 - Present

- Developing a Personal AI Tutor that guides a student and surface the next best possible course of action/module/material that the student should know to learn ML/AI concepts
- Currently working on developing on a Graph RAG model that will collaborate with a DAG structured database to provide content to the chatbot.
- Devising a chatbot by finetuning a pre-existing LLM and creating the surface for the chatbot using React/Next.js

Teaching Assistant, University of Toronto

Sep 2024 - Present

- Holding weekly office hours and tutoring sessions to help students understand complex topics
- Grading assignments, exams and ensuring timely feedback and accurate assessment
- Assisting the professor in developing course materials, quizzes, and tutorial exercises, improving student engagement

ML Developer, U of T Machine Intelligence Student Team

Sep 2023 - Aug 2024

- Implemented One-vs-Rest and Binary Relevance SVM and ensembled them with Naive Bayes to solve a Hierarchical Multi-Label Classification problem
- Collected and preprocessed raw data to feed into the models by performing tasks such as cleaning, normalizing, and feature engineering
- Collaborated using GIT & Notion, learning effective design & communication skills for large-scale ML development projects

Website Manager, UTM MSA

Sep 2023 - Apr 2024

- Managed the website of the MSA using HTML, CSS, and JavaScript
- Collaborated with the executive team to ensure the website was up to date with the latest events and information

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PROJECTS

NucleElse

[View Project](#)

- Developed a baseline model to identify dataset issues and benchmark performance against ensemble models, achieving an accuracy of 73%
- Designed a hierarchical SVM combined with Naive Bayes in order to include to the protein hierarchy while predicting protein functions

Math-BERT-T5 Hybrid Model for Mathematical Reasoning

[View Project](#)

- Developed an encoder with 6 blocks, inspired by T5 architecture, to address challenges in mathematical reasoning tasks.
- Analyzed 10+ research papers to convert mathematical word problems into tokens, aligning with deep learning best practices, and achieved a 20% reduction in training complexity.

Secure City

[View Project](#)

- Created a front-end interface using JavaScript(React), CSS, and HTML to address urban crime challenges
- Incorporated Google Maps API to provide real-time alerts for criminal activities
- Extracted and visualized crime data from police websites using web scraping techniques to enhance user situational awareness.

Adventure Game

[View Project](#)

- Designed an interactive text-based game using JavaFX, inspired by the Colossal Cave Adventure and incorporated design patterns for better modularity and scalability.
- Collaborated in a team of 4 to implement accessibility features, leveraging scrum/agile methodologies to reduce development time by 30%.

Mission: Extreme - iGraphics Project

[View Project](#)

- Developed a game using OpenGL library in C and C++, integrating modern iGraphics engine techniques.
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AWARDS & ACCOMPLISHMENTS

Dean's Merit Award

Scholarship in recognition of achieving over 95% as well as extracurricular participation

UofT International Scholar Award - \$100,000

Scholarship in recognition of international students who demonstrate superior academic achievement