

EDUCATION

McMaster University

Sept 2021 — Apr 2026

Bachelor of Computer Science | GPA: 4.0

- Provost Honour Roll and Dean's honour roll for achieving a GPA of 4.0

EXPERIENCE

Software Engineering / Machine Learning Intern

May 2023 — Aug 2024

Bell Canada | Python, VertexAI(GCP), LLM, Next.js, React, FastAPI, Big Query, PostgreSQL, Cloud Run

Toronto, ON

- Led planning and implementation of a fullstack generative AI app, reducing training costs by **65%** through simulating a customer.
- Collaborated with a team of **5** to scale the app for **5,000+** agents, leveraging **Next.js**, **FastAPI**, and **PostgreSQL**.
- Improved agent's performance by **30%**, utilizing Gemini's tool calling and dynamic rubrics to provide personalized feedback
- Increased the realism of scenarios through prompt engineering and fine tuning the LLM's weights

Teaching Assistant

June 2022 — Present

McMaster University | Python, Bash, PostgreSQL, Discord API

Hamilton, ON

- Optimized grading process for **1,000+** course materials (labs, assignments, exams) by developing **Python** and **Bash** scripts
- Taught **Python**, **C**, **Bash**, and **Linux fundamentals** to **100+** students through tutorials and labs

Technical VP

Jul 2022 — Present

DeltaHacks | Next.js, TRPC, Prisma, Netlify, Tailwind, NextAuth.js, Typeform, PostgreSQL

Hamilton, ON

- Managed **7** developers building a stack ranking based judging platform, streamlining **30+** judges' evaluation of **100+** projects
- Integrated **TRPC**, **Prisma**, and **Netlify functions** stack which **scaled** the backend to handle **10,000+** requests throughout the year
- Developed a graph-based matchmaking tool that paired over **500** hackers into compatible teams based on interest and skillset

PROJECTS

When the Assignment | A Tool for Tracking Upcoming Deadlines

Next.js, Tailwind, Shadcn, TypeScript, PostgreSQL, Prisma

- Employed a session-based architecture to eliminate the need for authentication and user sign up
- Developed a deadline-priority task tracking system to ensure appropriate time management.
- Implemented a platform-agnostic calendar syncing by hosting remote ICS files using **Next.js** middleware

PoC Agentic diner management system | A Tool for Tracking Upcoming Deadlines

Next.js, Tailwind, Shadcn, TypeScript, PostgreSQL, Prisma, Fastapi, Llamaindex

- Created a minimalistic frontend using **Shadcn** based on enterprise diner management systems
- Used **Llamaindex** hosted on **Fastapi** to create an agentic system to manage diner reservations based on emails and past reviews

Grassy | A friendly bracket robot that plays rock paper scissors

Python, Rive, Next.js, OpenCV, websockets, MQTT

- Created a frontend interface to communicate over **MQTT** websockets and show robot emotions through **Rive** animations
- Implemented a tracking algorithm using **OpenCV** to find people and prompt them to play rock paper scissors

HACKATHONS

Scuba - Declutter your email with ai agents | HackMIT

Python, LlamaIndex, Langchain

- Developed 5 LLM agents to automate emails using **LlamaIndex** and the **ReAct** reasoning method
- Created a **RAG** model based on past emails to allow extensive personalization and accuracy

Dash - All in one dashboard for digital life | HacktheNorth

GCP, Next.js, React, Typescript, Tailwind, Prisma ORM, CockroachDB

- Integrated with Yahoo, GitHub and Google APIs such as **Gmail**, **Calendar** to provide realtime updates
- Implemented a custom grid component in React to allow maximum user customizability

SKILLS

Languages

Python, Web Development (JavaScript, Typescript, HTML, CSS), Java, C++, C, Rust, Bash, Haskell

Frameworks

React, Next.js, Tailwind, Django, FastAPI

Tools

Linux, Git, Cloud Services (Google Cloud Platform, AWS), Relational Databases (SQL, PostgreSQL)

Design

Prototype design with Figma, Photoshop