**Daniel Liu**

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Description automatically generated [danielliu545@gmail.com](mailto:danielliu4@cmail.carleton.ca)  https://www.linkedin.com/in/daniel-liu-2938b0260 https://github.com/DanielLiui

**EDUCATION**

**Bachelor of Computer Science, AI and Machine Learning, Co-op** Sep. 2021 – expected Dec 2025

Carleton University, Ottawa, ON

* 4th year, 9.3/12 CGPA, B+
* Entrance scholarship (90%+ high school average)

**RELEVANT TECH STACK**

**Languages**: Python / Java / C / C++ / C# / Bash

**Web**: HTML / CSS / JavaScript / PHP / Node.js / Express / React / Flask / Bootstrap

**AI/ML**: Python data science libraries / Pytorch / Tensorflow / Langchain / Roboflow / YoloV5

**Databases and other**: SQL / MongoDB / Git / Github / Figma

**PROJECTS**

**Medical Anomaly Scanner** | Demo:[🔗](https://www.youtube.com/watch?v=8ZzDLK2BGv4)

* Worked in a team to train a **YoloV5** model that detects brain tumours and hemorrhages in brain CT scans and scoliosis in spinal X-rays with a **precision of 84%**. Used **Roboflow** for labelling and augmenting the data as well as training the model with **Pytorch**.
* Use **HTML/CSS/JS** to make a website that lets users test the model.
* Used **Git** to collaborate.

**Animated chatbot** | Website: [🔗](https://animated-chatbot-js.onrender.com/)

* Worked with a partner using **HTML/CSS/JS** and **Flask** to make a website with an animated chatbot that users can chat via text or orally.
* Powered the chatbot using OpenAI’s gpt-4o API and Google Cloud’s text-to-speech API in the **Flask** backend. Handled routes with **Express**. Animations were hand-drawn.
* Used **Github desktop** to collaborate.

**Dad Jokes website** | Website: [🔗](https://dadjokes-vsci.onrender.com/)

* Created a website that displays dad jokes from an API using **React** and **Flask**.
* Custom dad jokes are also rendered from a **MongoDB** database.

**Robot programs**

* Programmed robots using **Webots** (a robot simulator), **Java**, and **object-oriented programming** alongside partners in Carleton University’s course Intro to Robotics.
* Applied concepts of sensors, motors, kinematics, environment mapping, and path finding using graphs.
* Programs are only available upon request due to the privacy of the professor’s course materials.

**Medical app** | Demo: [🔗](https://www.youtube.com/watch?v=6wvdQDUlvG4)

* Built a **Qt/C++** medical app that guides users with how to use a RaDoTech device to scan themselves. Users can then see the health status of various areas of their body and view health recommendations.
* Used **Qt** for the app’s UI and **C++** and **object-oriented programming** for the backend.
* Worked in a team and used **Github desktop** to collaborate.

**EXPERIENCES**

**Metro Cashier**  Aug 2023 – Oct 2024

* Efficiently served customers with positivity as a cashier at a Metro grocery store.
* Got along with frontend colleagues to deliver excellent customer service. Store placed **#1 in Metro’s 2024 Customer Promises Store Recognition Program** out of all Metros in Ottawa based on customer satisfaction, increase in number of customers, and increase in customer order size.

**AI Camp** Aug 8 – Aug 31, 2022

* Attended AI Camp, a virtual boot camp that taught AI, machine learning, and web development.
* Worked with teammates on the Medical Anomaly Scanner website within 1 week under the supervision of a mentor.

**SKILLS**

**Fluent English with university level reading/writing/speaking**

* Achieved decent grades in university courses with written assessments focused on clarity and conciseness. Courses include *Intro to Philosophy* (grade: A) and *Literature, Science, and Technology* (B+).

**Strong computer science fundamentals**

* Learned **algorithms, data structures, and complexity analysis** from several of Carleton University’s CS courses, predominantly from Abstract data structures and algorithms (grade: B).
* Learned **object-oriented programming** and made several school projects using it, predominantly from Intro to Software Engineering (A) and Object-Oriented Software Engineering (A).
* Learned **operating systems** from Carleton’s Operating Systems course (B).

**Strong AI/ML and math foundation**

* Achieved As in *Intro to Artificial Intelligence* and *Intro to Machine Learning*, which teach a host of AI/ML concepts as well as their math and statistics.
* Achieved As in university math courses Linear Algebra (A) and Elementary Calculus 2 (A+).

**REFERENCES**

**Metro front-end manager** — Binny | 613 526 5994

**High school math teacher** — Sorina Petres | sorina.petres@tdsb.on.ca

*Recommendation letter* on last page

A letter with a signature

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