

Sunny Yao

(+1) 905-952-9186 | sunnyyao3141@gmail.com | [LinkedIn](#) | [Github](#) | [Website](#)

Education

McMaster University

2021 - 2025

Software Engineering

Relevant Courses: Databases, OOP, Computer Architecture, Data Structures and Algorithms

Technical Skills

Languages: Java, C, C++, C#, Python, JavaScript, Verilog

Web and Mobile Development: React, HTML, CSS, Flask, Node.js, React Native, Android Studios

Clouds & Databases: Firebase, MongoDB, MySQL

Data Science and Analytics: Jupyter Notebooks, Google Colab, Pandas, Scikit, Matplotlib, R, Matlab

Developer Tools: Docker, Vim, SSH, Git, Bash, Linux, Unix, VMWare, Maven, Gradle

Work Experience

Engineering Co-op Student

May 2022 – Sept 2023

TS Tech Canada

Newmarket, Ontario

- Programmed computer vision systems (Keyence IV3/Cognex IS2800) for automatically detecting thousands of failure points to reduce defective product recalls, saving over \$45,000 annually
- Simulated Yaskawa collaborative robots in MotoSim software to verify defect detection cycle time, ensuring efficient automation processes
- Managed 3 automation projects with budgets totaling \$81,000 USD handling planning, testing and implementation after returning for a second co-op term

Data Annotator

Apr 2024 – Present

Data Annotation Tech

Hamilton, Ontario

- Evaluated and tested code outputs for efficiency, correctness, and safety to improve overall quality and reliability of the training data of modern Large Language Models
- Engineered prompts for model AB testing to improve the efficacy of end-user interactions with AI

Projects

Computer Vision Virtual Mouse | Python, Mediapipe, OpenCV, Numpy

- Developed a desktop app for tracking hand gestures through a webcam to use as a hardware-free mouse peripheral capable of reading inputs at real time with under 35ms of latency
- Trained the recognition of hand gestures from a live webcam feed to control mouse interactions
- Achieved 3rd place in Student Life Network's Remarkable Students Showcase out of over 700 entries

Conversational Large Language Model - Funhouse Bot | Pandas, Scikit, Colab

- Automatically scraped and cleaned over 100,000 conversational messages with context from Discord
- Trained 2 personalized conversational LLMs using anonymized conversational data with context using Google Colab GPUs
- Deployed using [Huggingface](#) for cloud inference and remote API requests

NoteShare Website [2023 DeltaHacks 9 Hackathon Submission] | React, Firebase, CSS, HTML

- Developed and hosted a full stack website that offered file hosting for class notes and provide course overviews from web-scraped university course offerings
- Connected Firebase backend for file storage and retrieval as well as user authentication

Digital Assistant Bots | JavaScript, Node, MySQL, Python

- Created 24/7 uptime Discord bots that monitor and record server messages for data analysis
- Maintained remote backups for several hundred thousand messages

Procedural Island Generators | Java, Maven

- Developed a 2D mesh generator using seeded Delaunay Triangulations and plotted procedurally generated islands and exported into scalable vector graphics
- Automated unit tests using JUnit and Log4J

Awards

- AP Scholar Award
- McMaster Faculty of Engineering Award of Excellence
- McMaster Dean's Honour List