

# SUNNY YAO

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## EDUCATION

### McMaster University, Hamilton

BASc, Software Engineering

2021 - Present

3.95 GPA

## WORK EXPERIENCE

### TS Tech Canada

Engineering Co-op Student

May 2022 – July 2023

2 Consecutive Co-op Terms

- Programmed computer vision systems(Keyence IV3/Cognex IS2800)for industrial use in a headrest inspection station
- Simulated Yaskawa collaborative robots using MotoSim software to verify defect detection cycle time
- Presented design solutions, timelines, and budgets to senior management throughout project life cycles
- Project lead for 3 separate projects with budgets totaling \$81,000 USD, handling planning, testing and implementation

### Data Annotation Tech

Data Annotator

Apr 2023 – Present

- Evaluating Large Language Models code outputs for efficiency, correctness, and safety
- Prompt engineering for model AB testing to improve the efficacy of end-user interactions with AI assistants

## PROJECTS

### Computer Vision Vision Mouse(Python)

- Developed a desktop application for tracking hand gestures through a webcam feed to control a mouse peripheral
- Used Google's MediaPipe library for human hand landmark position tracking and OpenCV for processing live video feed
- Trained the recognition of hand gestures in a webcam feed to control a mouse peripheral
- Won 3rd place in Student Life Network's Remarkable Students Showcase out of over 700 entries

### Conversational Large Language Model - Funhouse Bot(Python)

- Automated web scraping and data cleaning for over 100,000 conversational messages with context from Discord
- Trained 2 conversational LLMs using anonymized conversational data using Google Colab GPU
- Deployed to [huggingface.co/Stratum/FunhouseBot](https://huggingface.co/Stratum/FunhouseBot) for cloud inference and remote API requests

### Discord Bots (JavaScript, Python)

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

### NoteShare Website (JavaScript, CSS, HTML)

- Website that offers file hosting and course exploration to share notes and class resources
- Connected to Firebase back end for file storage and retrieval
- Made in 48 hours in a team for submission into the 2023 DeltaHacks 9 Hackathon

## TECHNICAL SKILLS

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

**Web Development(Frontend/Backend):** HTML, CSS, Flask, Node.js

**Web Development(Mobile Development):** React Native, Android Studio

**Clouds & Databases:** Firebase, MongoDB, SQL

**Data Science and Web Scraping:** Pandas, Scikit, Matplotlib, R, Matlab, BeautifulSoup4

**Developer Tools:** VS Code, Vim, SSH, GitHub, Linux, Unix, VMWare

## HONOURS AND AWARDS

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