

Marwan Yousef

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EDUCATION

University of Toronto

Bachelor of Science in Computer Science | GPA: 3.7

Toronto

2025

EXPERIENCE

Software Engineering Intern

May 2023 – August 2023

Peaches Solutions

- Facilitated object recognition for 400+ visually impaired individuals by using **OpenAI's API**.
- Implemented **Django** backend for the app, enabling secure storage of **10K+** users' data.
- Enhanced object recognition with **GPT-4** through supervised ML, doubling object identification to **1,000+**.
- Using **TensorFlow**, achieved a solid **95%** object recognition rate.

PROJECTS

InsiderUnlocked

- Developed a web app to preview senators' financial investments gaining **5000+ views** using **React & Django**.
- Developed ETL pipeline for senators' investment data using **Python**, and **SQL** producing **700k** cleaned rows.
- Analyzed US senators' investment data, identifying top stocks & large portfolios using **Pandas**, and **Matplotlib**.
- Created a data pipeline with **Python**, **SQL**, and a **custom scheduler** resulting in 10-day data refresh.

SitUp! | UTM Deerhacks Winner

- Built a platform that classifies 7 key points that affect a person's posture using **TensorFlow**, and **Movenet**.
- Developed and trained an artificial neural network to determine bad posture using **Sklearn**, and **Tensorflow**.
- Conducted multiple iterations of model training and hyperparameter tuning, resulting in **9%** model improvement.
- Implemented a real-time detection system to notify users of bad posture using **Flask**, improving user awareness.

Hands Free | RUHacks Winner

- HandsFree is a desktop app that listens to users, and looks for gestures to complete daily digital actions.
- Built a classification system for gestures in correlation with digital actions using **OpenCV**, **Mediapipe**, **Python**.
- Developed a software licensing system using **dynamic QR codes** to ensure app security using **Auth0**.
- Created an authentication system and web-app to support software installation using **React** and **Django**.

ChatWatch | Peel Hacks Winner

- ChatWatch is a web app that can return statistics regarding any past stream from Reddit, Twitch and YouTube.
- Implemented server-side caching, reducing request runtime by up to **96%** with **SQLite**, **Redis**, and **Django**.
- Built an **NLP** pipeline for chat message analytics with **Python**, **NLTK**, & **Pandas** for user insights.

TECHNICAL SKILLS

Languages: Python, Java, JavaScript, TypeScript

Databases: MongoDB, SQLite, MySQL, Flask

Libraries: Matplotlib, Pandas, Scikit, Scipy, Tensorflow, Keras, NLTK, PyTorch, Movenet, OpenCV, Mediapipe

Frameworks: FastAPI, Django, Flask, React, Angular, Express

AWARDS

PicoCTF (Carnegie Mellon University) 2022 - **2nd** in Canada out of 350+ teams, 15th in the world out of 7700+ teams.

PicoCTF (Carnegie Mellon University) 2021 - **6th** in Canada out of 500+ teams, 9th in the world out of 8000+ teams.

United States of America Computing Olympiad 2021-2022 - Plat division (**Top 1%**)