

# Marwan Yousef

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## Education

University of Toronto

Honours Bachelor of Science in Computer Science

Toronto, Ontario

2025

## Experience

Full-Stack Developer

June 2021 – August 2021

Peaches Solutions

Remote

- Designed and built a responsive React website, providing seamless user experience for **500+** monthly visitors
- Implemented **Flask** backend for website, enabling secure storage of **10K+** users' data
- Created SQL-integrated authentication feature for website using **JS** and **SQL**, providing secure access for users

## Projects

InsiderUnlocked | *Matplotlib, Pandas, React, Django, SQLite, Redis, Scheduler*  

- 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 over **700k** cleaned rows.
- Analyzed US senators' investment data, identifying top stocks & largest portfolios using **Pandas**, and **Matplotlib**.
- Implemented a scheduled data pipeline using **Python**, **SQL**, and a **custom scheduler**, resulting in 10-day data refresh

SitUp! | **UTM Deerhacks Winner** | *TensorFlow, Movenet, Sklearn, Flask, JavaScript, HTML, CSS*  


- 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** | *Python, HTML, CSS, JavaScript, Mediapipe, OpenCV*  

- 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** | *NLTK, TextBlob, Django, SQLite, React, Redis, Chakra-UI*  

- ChatWatch is a web app that can return statistics regarding any past stream from Reddit, Twitch and YouTube.
- Implemented server-side database caching, to reduce request runtime by up to **96%** using **SQLite**, **Redis** and **Django**
- Created an **NLP** pipeline to provide analytics on chat messages for content creators using **Python**, **NLTK**, & **Pandas**

CV Radio | *Discord, Discord.py, asyncio, Youtube-DL* 

- Implemented queue system using **Python** for music bot, improving music management efficiency by **40%**.
- Streamlined audio playback integration for Discord music bot by incorporating major streaming services
- Enabled universal volume control for bot with **Youtube-DL**, improving engagement
- Created concurrent audio feature, allowing multiple servers to stream simultaneously, increasing performance by **50%**
- Designed custom command functionality for CV Radio bot using **Discord.py** and **asyncio**, increasing bot popularity

## Technical Skills


**Languages:** Python, Java, JavaScript, TypeScript, Kotlin


**Databases:** MongoDB, Firestore, PostgreSQL, SQLite, MySQL, Flask

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

**Frameworks:** Apache Airflow, FastAPI, Django, Flask, React, Angular, Vue, Express, Nest, Kafka

## 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%**) 