Eddy Wang *Computer Science Student*

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SKILLS

Coding Languages and Platforms
Python, Flutter, **Java**, Django, **C**, Unity, **Javascript**, Groq, **C++**, VS Code, Pandas, Github, GitBash, NumPy, **OpenCV**, TensorFlow, **React**, Arduino IDE, **PyTorch**, Vagrant, Android Studio, VirtualBox, NetworkTables, **Linux**, Atlassian Confluence, Meta SDK, **Flask**, **MongoDB**, OpenAI, **C#,** Microsoft Azure, **Pinecone**, WSL

Concepts
OOP, Functional Programming, HTML Requests, Recursion, **Machine Learning**, GPIOs, **Neural Networks**, Sort and Selection, **Inheritance**, PID Control Loop, CRON Jobs, Data Structures and Algorithms, Interrupts and Timers, DMA, ADCs, **Unit Testing**, **Agile Sprint Planning**, Overloading, **SCRUM**, TTS, STT, **RAG**

EXPERIENCE

Full Stack Engineering / AI at Nymble Health
November 2024 - April 2025
- Built a chatbot using OpenAI, Streamlit, and RAG, leveraging Pinecone for vector-based search to improve response accuracy.
- Developed backend APIs to calculate semantic scores, factual consistency, intent match, and if human review is needed.
- Designed a pipeline to extract, parse, and store JSON from Google Docs to Azure Blob Storage, then upsert into Pinecone.
- Deployed scalable Azure Apps, implemented APIM layers, and optimized performance with load balancing and auto-scaling.

Software and Firmware Development Intern at Ford
May 2024 - August 2024
- Implemented unit tests on software modules, achieving a 30% increase in coverage by initializing states for each branch
- Developed automation scripts to significantly reduce manual testing time by 50% and improved code accuracy
- Debugged MISRA code violations to ensure compliance with industry standards and improving system reliability
- Measured CPU usage and start time, leading to optimizations while triaging PRs to resolve performance issues

PROJECTS

Universal Gestures - Waterloo Reality Labs
September 2024 - Current
- Aimed to develop a Unity package for Meta Quest headsets, using ML to recognize more complex hand gestures
- Trained PyTorch neural networks on hand-tracking data, improving recognition of custom hand gestures over Meta's XR SDK
- Designed a C# script for Unity, allowing developers to easily integrate advanced gesture recognition with flexible thresholds
- Created tools for recording custom hand gestures in Unity, enabling developers to train their personalized models

Bird Classifier App
December 2023 - Current
- Learned basics of machine learning through Google's crash course (introduction to TensorFlow and training/testing data)
- Categorized bird species into NumPy arrays and partitioned the data set into a training data and a testing data
- Used TensorFlow Keras to build a sequential model and added Conv2D filters to increase the depth of image perception
- Saved evaluated and trained model as a JSON file to be used to predict the bird species of a singular image
- Developed app in Android Studio using Flutter to inference captured images as image bytes with the Tflite model

RizzVision - HTN 2024
September 2024 - October 2024
- Developed an AI-powered system using a Raspberry Pi 5 with a webcam, mic, and speaker to analyze real-time conversations
- Integrated AI inference through Groq API for speech/sentiment analysis, providing users with real-time suggestions
- Used Flask for UI and MongoDB to store conversation data including the report, managing data between backend and frontend
- Leveraged AssemblyAI for STT, OpenAI for TTS, and OpenCV with a custom-trained model for emotion detection

ADDITIONAL INFORMATION

Clubs/Interests
UW Midnight Sun Design Team, Varsity Waterloo Figure Skater, 3D Printing Enthusiast, National Figure Skater, UW Reality Labs (VR/XR), Member of Waterloo's Debate Society

Awards
ARCT Performers Piano First Class Honours, House of Commons Certificate (Auxilium), Debate Xerxes Cup Finalist, DELF B2, WHMIS 2015, Worker Health and Safety Awareness

EDUCATION

Candidate for Bachelor of Computer Science 2023/09 – 2028/04
University of Waterloo Waterloo, Canada