Tiffany Lin

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B.C.S Candidate Computer Science 2021-2026

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Skills

Languages: Python, C++, Java, C, JavaScript, TypeScript, SQL
Frameworks & Libraries: PyTorch, TensorFlow, OpenCV
Tools & Platforms: Docker, AWS, Git, Android Studio

Experience

Huawei Technologies Co., Ltd – Associate Engineer Intern — Markham, ON | Feb 2025 – Aug 2025

- Optimized image generation pipeline built on **Stable Diffusion XL**, fine-tuned with **LoRAs** and **ControlNets** to improve output quality and reduce inference time
- Integrated a **reward feedback learning** module into the pipeline, aligning outputs with human preferences using **reinforcement-style** optimization
- Experimented with **MLLMs** (e.g., BLIP-2/3, LLaVA-NEXT, InternVL, Qwen-VL) for classification tasks and prompt engineering, improving evaluation and controllability
- Designed a pipeline for **dataset/benchmark creation** in widget generation, initiated data crawling to support a forthcoming paper submission
- Investigated state-of-the-art methods in **GUI Agents** and **layout generation**, including evaluation of frameworks such as AndroidWorld and UI-TARS, to identify limitations and research opportunities

Huawei Technologies Co., Ltd – Assistant Engineer Intern — Markham, ON | Sept 2023 – Apr 2024

- Developed and released the '**AI Best Expression**' feature on Huawei nova smartphone to capture best expressions in group photos
- Designed and implemented a solution using **Java OpenCV** and computer vision models to correct faulty results in AI Best Expression, resolving **80%** of flawed cases
- Built and maintained testing APKs with Android Studio (Java), serving as the primary maintainer responsible for all updates
- Translated **Python** preprocessing steps for signal processing techniques (**FFT**, **MFCC**) into **C** to improve code efficiency
- Explored generative models (**diffusion** models, **GANs**, **transformers)** to investigate video generation capabilities

AutoMetrics Manufacturing Technologies Inc. – Machine Learning Intern — Markham, ON | Jan 2023 – Apr 2023

- Led a team of 2 to develop and integrate a novel semi-supervised anomaly detection model with F1 score of **0.73**
- Researched and self-taught **8** machine learning models, leveraging this knowledge to optimize **3** integrated models in *Inspection 4.0*, a welding anomaly detection system
- Engineered modular frameworks for server-side data preprocessing (e.g., signal denoising filters), to improve pipeline efficiency
- Labeled client data on **AWS** and trained a **semantic segmentation** model, achieving **85%** accuracy in defect detection

ADLINK Technology Inc. – Software Engineer Intern — Taipei, TW | May 2022 – Aug 2022

- Developed a machine learning model with **Python** using DBSCAN on FFT-based features to perform anomaly detection of different waveforms
- Extended ADLINK's Edge Data Analytics platform by implementing back-end **C++** and front-end **Python** modules for I/O

Projects

Wat2Eat – User-Food Matching App — Sept 2025 - Present

Kotlin, Supabase

- Led a team of 4 to develop Android app that matches users with similar food preferences using Kotlin, Jetpack Compose, and Supabase
- Designed Supabase (PostgreSQL + Auth) backend with real-time data sync and reactive swipe-matching flow

BiQuadris – Tetris Clone — Sept 2022 – Dec 2022

C++, XQuartz

- Developed a Tetris clone using **C++** with MVC architecture and multi-level gameplay logic
- Successfully collaborated in team of 3, earned a final grade of 97%