Mu-Ruei Tseng

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Summary

An accomplished Master of Computer Science student at Texas A&M University, proficient in diverse software development domains, including full-stack development with .NET, Python, and Vue.js, conducting Machine Learning and Computer Vision research, and robotic programming.

Education

Texas A&M University — **College Station, Texas**
Master of Computer Science — Aug. 2023 - Exp. Jun. 2025

The Hong Kong University of Science and Technology — **Hong Kong**
Bachelor of Science in Computer Science and Mathematics — Sep. 2017 - Aug. 2021
Minor in Robotics. Graduated with First Class Honors and GPA 3.66/4.3.

Technical Skills

- Python (Pytorch, Tensorflow, OpenCV, Tkinter, Flask), C# (Emgu CV, Emgu TF), C++, HTML, JavaScript, TypeScript, CSS, SQL, Swift, Java
- .Net, Vue.js, React, Git, LaTeX, Unity

Professional Experience

Neurobit Technologies — **Taipei City, Taiwan**
Software Engineer, Computer Vision — Jun. 2022 - Jul. 2023

- Developed a application dedicated to oculomotor tests, built using WPF with MVVM structure.
- Designed a labelling tool using ASP.NET Core Blazor for efficient data organization and curation.
- Conducted comprehensive eye gaze model research to identify potential Nystagmus symptoms.

CSE department, The Hong Kong University of Science and Technology — **Hong Kong**
Research Assistant, advised by Prof. Chi-Keung Tang — Jul. 2021 - Dec. 2021

- Researched Human Action Recognition models for accurate performance with limited training data, and developed a novel 3D+T Human Action Dataset for advanced human pose estimation (HAA4D).

Alliance Technology Global Limited — **Hong Kong**
Frontend Developer Intern — Nov. 2021- Dec. 2021

- Created an admin portal for Aero Link utilizing Vue.js, and design modular components for reusability across multiple projects.

Lilee Systems — **New Taipei City, Taiwan**
Software Engineer Intern — Dec. 2019 - Jan. 2020

- Real-time monitoring of bus drivers' behavior via feature extraction using state-of-the-art algorithms.
- Developed GUI using Tkinter for dataset management and accelerated labeling processes.

Selected Projects

HAA4D: Few-Shot Human Atomic Action Recognition via 3D Spatio-Temporal Skeletal Alignment

- Proposed a skeleton-based action recognition model that make use of few-shot learning and the explicit geometric property of human skeleton in the globally aligned space.

GuitarTabPro

- Extract tabs in YouTube guitar tutorial videos and combine them into a complete sheet.

STM32 Live Stream Car

- Built a three-wheels remote control car using STM32 cpu that can return live streams of the current room with a frame rate of 1~2 FPS.

Real-Time Object Detection with Depth Estimation on Mobile Devices

- Designed a real-time, mobile-optimized multitasking model. Deployed on an iPhone 8 with 17.7 MB size and achieving a frame rate of 6.41 FPS.

Achievements

- Entered the National Round of the NXP Cup 2019 - "Creative" category, China — Aug. 2019
- The Third Price of the NXP Cup 2018 - "Dual Car" category, South China Region — Jul. 2018