Mu-Ruei Tseng

✉ morris88826@gmail.com | 🌐 https://morris88826.github.io/ | ⌂ github.com/Morris88826 | ☎ (979) 933-7055

Summary

Master of Science in Computer Science student at Texas A&M University with expertise in Machine Learning, Computer Vision, full-stack development (Python, .NET, Vue.js), and robotics programming. Actively seeking an internship to apply and expand my skills in software development and research

Technical Skills

- **Languages & Tools:** Python (PyTorch, TensorFlow), C# (.NET, WinForms, WPF), C++, SQL, Java
- **Frontend & Frameworks:** Vue.js, React, HTML, JavaScript, CSS
- **Robotics & Development:** ROS, Unity
- **Other Tools:** Git, LaTeX

Experience

CSE department, Texas A&M University   **Feb. 2024 - now**
Graduate Research Assistant, advised by Prof. Ricardo Gutierrez-Osuna
- Research on deep learning models for hypoglycemia detection, leveraging ECG signal data to improve real-time monitoring and early detection for diabetic patients.
- Developed and released the SenSE-T1DM dataset, the first to integrate ECG, PPG, and CGM data, setting a new standard for multi-modal physiological research in Type 1 Diabetes (T1D).

Neurobit Technologies   **Jun. 2022 - Jul. 2023**
Software Engineer, Computer Vision
- Developed a full-stack app using C# and WPF .NET optimizing the nystagmus diagnosis process for doctors.
- Conducted eye gaze research using deep learning, obtaining accurate human gaze in real-time with MAE < 5 degrees.
- Designed a labelling tool using ASP.NET Core Blazor, improving data organization and curation efficiency.

CSE department, The Hong Kong University of Science and Technology   **Jul. 2021 - Dec. 2021**
Research Assistant, advised by Prof. Chi-Keung Tang
- Proposed a Human Action Recognition model that achieves state-of-the-art accuracy under limited training data.
- Established a challenging 3D+T Human Action Dataset with more variety poses for future action studies (HAA4D).

Alliance Technology Global Limited   **Nov. 2021- Dec. 2021**
Frontend Developer Intern
- Created an admin portal for Aero Link utilizing Vue.js, and designed modular components for reusability.

Lilee Systems   **Dec. 2019 - Jan. 2020**
Software Engineer Intern
- Real-time monitoring of bus drivers' behavior via feature extraction using Computer Vision algorithms.
- Developed GUI using Tkinter that supported dataset management and accelerated labeling processes.

Robotics Team, Hong Kong University of Science and Technology   **Feb. 2018- Aug. 2019**
Software Team Member
- Created streamlined C++ algorithms for self-driving model cars, integrating various hardware components.
- Innovated a vehicle encounter algorithm that successfully prevented collisions between two cars on the track.

Selected Projects

HAA4D: Few-Shot Human Atomic Action Recognition via 3D Spatio-Temporal Skeletal Alignment
- Proposed a novel skeleton-based action recognition model that utilizes few-shot learning and leverages the explicit geometric properties of the human skeleton, outperforming traditional methods given few training data.

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.

Education

Texas A&M University   **Aug. 2023 - Exp. Dec. 2025**
Master of Science in Computer Science   GPA 4.0/4.0
The Hong Kong University of Science and Technology   **Sep. 2017 - Aug. 2021**
Bachelor of Science in Computer Science and Mathematics, Minor in Robotics   GPA: 3.66/4.3, First Class Honors