Michael Tan

An innovative, industrious, and quick-learning software engineer with 3+ years of experience in project development. Proficient with C++ and Python. Having passion for semiconductor field. Seeking a challenging software / firmware engineering position that fully utilizes my experience as a programmer.

🌐 https://tantantw.com   @ m5823779@gmail.com   ⚙ https://github.com/m5823779

Experience

Acer   Software Engineer   2020.01 - 2022.11

Focused on developing **computer vision solutions** and **deep learning models**, including **algorithm performance analysis, optimization, debugging, SW / HW verification**, and solving real-world problems

- Developed and maintained new product **"Acer SpatialLabs™ "** (stereoscopic 3D solution)   Website / Demo
  - Proposed and built the industry's first algorithm for converting any 2D content into stereo 3D in real-time to overcome hardware limitations
  - Reduced image processing time by 90% using **GPU accelerated (CUDA)** to reach real-time performance
  - Reduced inference latency by 70% via **data compression (Quantization)** for edge device support
  - Verified solution feasibility, built prototypes, and demonstrated to the management
  - Developed comprehensive project plans to drive the implementation of the product
  - Assisted QA, and PM team in issue managing, tracking, and solving. Collaborated with the UX/UI team to ensure the implementation of requirements
  - Managed the product version and release process to facilitate software updates for the PM team and outsourcing vendors
- Developed an AR application, offering users virtual extended screen around the display. Collaborated with ID team to improve calibration methods   Website
- Designed an SDK to simplify the development process, also mentored 3 interns with related tasks
- Collaborated with a 3rd party partner's (Intel) to deploy solutions on the VPU (Vision Processing Unit)
- Assisted legal team to apply **15 technical patents**   Detail
- Developed AI models to achieve object detection for QR codes and semantic segmentation for foreground-background subtraction   Website
- Hosted a deep learning technology sharing session at the monthly RD meeting.

Skills

Languages: C++ / Python / CUDA / HTML / XML
Operation System: Windows / Linux (Ubuntu)
Technologies: Pytorch (Libtorch) / Tensorflow / OpenVINO / ONNX / Windows ML / OpenCV / Direct3D /
                Git / Windows Installer / SLAM / ROS

Education

National Taiwan University of Science and Technology   **2017.09 - 2019.08**
M.S IN Mechanical Engineering

- Thesis: Developed an algorithm to localize robot pose using a monocular image   Website / GitHub

Yuan Ze University   **2013.09 - 2017.08**

B.S IN Mechanical Engineering

Certificates

Taiwan AI Academy   **2021.05 - 2021.08**

- 350+ hours certified
- 1st place in the semester presentation contest: AI Fashion Persuade   Website / GitHub
  Developed a system to search similar clothing in the database with web services to support Line chatbot

Self-Learning

- Studying knowledge in algorithms and data structures, and enhancing programming skills through practical exercises (2022.12 - Now)
- Side project: Implement and research face recognition algorithm (2022.12 - 2023.02)
- Side Project: Deployed deep reinforcement learning algorithms for a learning-based mapless motion planner (2019.07 - 2020.10)   Website / GitHub