Oscar Sheng-Wei Li

oscar.liswei@gmail.com ❖ github.com/pha123661

WORK EXPERIENCE

Google — May 2025 – Present
Machine Learning Algorithm Engineer
- **Created and implemented ML algorithms** addressing unsolved challenges in a product context.
- **Drove hardware- and silicon-aware optimizations for ML algorithms**, influencing future SoC chip designs.
- Generated **patentable intellectual property** from system-level machine learning algorithm design.

Google — Jun 2024 – Sep 2024
Machine Learning Intern
- **Accelerated image-to-image generation by 25x** through custom diffusion schedule and model design.
- Developed an **Gen-AI image editor delivering outperforming Stable Diffusion** in both image quality and instruction alignment **while using 10x less compute**.
- **Proposed reference-free evaluation metrics** for tuning models in instruction-based image editing.

Intel — Jul 2023 – May 2024
Software Engineering Intern
- **Implemented Test-Driven Development (TDD), reduced system boot time by 20%** and achieved 90% test coverage through a C/C++ and GoogleTest rewrite of the System Management BIOS.
- Developed an **LLM copilot for unit test generation**, resulting in a 20% increase in test coverage.

National Applied Research Laboratories — Feb 2023 – Aug 2023
LLM Engineer, TAIDE LLM
- **Led instruction finetuning** efforts for TAIDE, a large language model family with up to **70B parameters**, addressing the challenges of **low-resource Traditional Chinese** and Taiwanese cultural nuances.
- Optimized pre-training corpus, achieving **20% computational savings and 8% performance boost**.

EDUCATION

National Taiwan University — Sep 2022 – Sep 2024
MS in Computer Science, Graduate Institute of Networking and Multimedia
- **First-Author Publication at ECCV 2024** on Vision-Language alignment and Generative Models.
- **Top 1% of Class**; Member of the Phi Tau Phi Scholastic Honor Society.

National Yang Ming Chiao Tung University — Sep 2018 – Jun 2022
BS in Computer Science, Department of Computer Science
- **Top 4% of Class; GPA: 4.11/4.3**; Dean's List for three semesters.
- **ML-based control solution with TSMC won Gold** in the Intelligent Living Space Design Competition, 2022.

PUBLICATIONS

SA-DVAE: Improving Zero-Shot Skeleton-Based Action Recognition by Disentangled Variational Autoencoders.
ECCV '24 (*European Conference on Computer Vision*) – **S. Li**, Z. Wei, W. Chen, Y. Yu, C. Yang and J. Hsu [PDF][Code]

SKILLS

- **Machine Learning**: PyTorch, TensorFlow, JAX, DeepSpeed, Parallel Training, Edge ML Optimization
- **Software Engineering**: C/C++, Python, JavaScript, SQL, MongoDB, Docker, GitFlow, GoogleTest, Bash Script, Parallel Computing, Test-Driven Development, Operating System, Algorithm