Hung-Yueh Chiang

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Career

Software Engineering Intern, Rivian, Palo Alto CA, USA Jun. 2023 – Aug. 2023

- Neural Architecture Search (NAS) for 3D object detection

Research Scientist Intern, Amazon, Seattle (Remote), USA May 2022 – Nov. 2022

- Image synthesis and generation for shoe virtual try-on with diffusion models
- The work, *Shoe-ViTON: Detail-Preserving Virtual Shoe Try-On with Dual Conditional Diffusion Models*, is accepted in Amazon Machine Learning Conference (AMLC) as a long presentation

XYZ Robotics, Shanghai *Jun. 2019 - May 2021*

- Develop production-level deep learning vision systems on logistic robots
- Develop a multi-modal (image, depth, and normal) segmentation model for predicting best picking area on the objects
- Synthesize training data with Blender for unseen items to improve the model's generalization
- Develop deep learning services (segmentation/object detection) with Robot Operating System (ROS) in products

Skills and Tools

Programming language: C/C++ (Boost, PCL, OpenCV, OpenNI), Python (Numpy, Matplotlib, PyQt, Tkinter)
Learning framework: Tensorflow, Pytorch (Python and C++), MXNet, ONNX
CUDA Libraries: CUTLASS, cuBLAS, cuSPARSE, PTX
Tools: Linux, Git, Google Test, Google Log, CMake, Pylint, Clang-format, yapf, Blender

Education

The University of Texas at Austin *Sep. 2021 – 2025 (anticipated)*
Ph.D. in Electrical and Computer Engineering
Affiliation: Energy-Aware Computing Group (EnyAC)
Research Direction: Efficient ML
Advisor: Prof. Diana Marculescu

National Taiwan University *Sep. 2016 - Sep. 2018*
M.S. in Computer Science and Information Engineering (GPA: 3.87/4.3)
Affiliation: NVIDIA-NTU AI Lab
Thesis: A Unified Point-Based Framework for 3D Segmentation (Top performing on ScanNet in 2018)
Advisor: Prof. Winston Hsu

ETH Zurich *Jan. 2015 - Sep. 2015*
Undergraduate Exchange Program

National Yang Ming Chiao Tung University *Sep. 2011 - Sep. 2015*
B.S. in Computer Science Elite Program (GPA: 4.08/4.3)

Honors and Awards

- Engineering Fellowship from The University of Texas at Austin Graduate School, 2021
- Second Place at ScanNet benchmark and invited talk at CVPR 2019

Selected Publications

- *Quamba: A Post-Training Quantization Recipe for Selective State Space Models*. **Hung-Yueh Chiang**, Chi-Chih Chang, Natalia Frumkin, Kai-Chiang Wu, and Diana Marculescu, Under reviewing 2024
- *SCAN-Edge: Finding MobileNet-speed Hybrid Networks for Diverse Edge Devices via Hardware-Aware Evolutionary Search.* **Hung-Yueh Chiang** and Diana Marculescu, ICLR Workshop 2024
- *Cache and Reuse: Rethinking the Efficiency of On-device Transfer Learning.* Yuedong Yang, **Hung-Yueh Chiang**, Guihong Li, Diana Marculescu, Radu Marculescu, CVPR Workshop 2024
- *Efficient Low-rank Backpropagation for Vision Transformer Adaptation.* Yuedong Yang, **Hung-Yueh Chiang**, Guihong Li, Diana Marculescu, Radu Marculescu, NeurIPS 2023
- *MobileTL: On-device Transfer Learning with Inverted Residual Blocks.* **Hung-Yueh Chiang**, Natalia Frumkin, Feng Liang, and Diana Marculescu, AAAI 2023 (**Oral**)
- *A Unified Point-based Framework for 3D Point Cloud Segmentation.* **Hung-Yueh Chiang**, Yen-Liang Lin, Yueh-Chen Liu, Winston Hsu. 3DV 2019