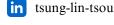
# Tsung-Lin Tsou









## **About Me**

I am skilled in Computer Vision, 3D Object Detection, Domain Adaptation, and Sensor Fusion. My research is mainly focused on autonomous driving: Intersection Management and 3D Perception.

### Education

**National Taiwan University** 

**National Taiwan University** 

**Taipei, Taiwan** 2017 - 2021

B.S. in Computer Science and Information Engineering

**GPA**: 4.23 / 4.3, **Ranking**: 3% [<u>transcript</u>]

**Honors**: Dean's List Award \* 4

Taipei, Taiwan

M.S. in Computer Science and Information Engineering

2021 - 2023

Advisor: Prof. Winston H. Hsu

Lab Affiliation: Communication and Multimedia Lab (CMLab)

### **Publication**

### **Preprint**

[1] **TL Tsou**, TH Wu, WH Hsu. "WLST: Weak Labels Guided Self-training for Weakly-supervised Domain Adaptation on 3D Object Detection". (Under review at ICRA 2024.) [paper], [github]

- We proposed a general weak labels guided self-training framework to obtain more robust pseudo labels and improve the domain adaptation (DA) performance in a cost-effective way.
- Our framework is extensively evaluated on three widely used 3D object detection datasets and outperforms previous state-of-the-art methods on all evaluation tasks.

### **Conference Paper**

[2] TL Tsou, CW Lin, Iris HR Jiang. "Deadlock Analysis and Prevention for Intersection Management Based on Colored Timed Petri Nets". DATE 2022. [paper], [github]

- We proposed a Colored Timed Petri Net (CTPN) based model for intersection management, allowing us to consider timing, vehicle-specific information, and different types of vehicles.
- We are the first work that design deadlock-free policies to guarantee deadlock-freeness in intersection management.

[3] YK Huang, YC Liu, TH Wu, HT Su, YC Chang, TL Tsou, YA Wang, WH Hsu. "S3: Learnable Sparse Signal Superdensity for Guided Depth Estimation". CVPR 2021. [paper]

### **Workshop Paper**

[4] CC Kung, **TL Tsou**, CW Lin. "Intelligent Intersection Management with Non-Connected and Non-Autonomous Motorcycles". DESTION 2020 [paper]

# **Work Experience**

### Software Engineer Intern

Hsinchu, Taiwan

MediaTek, Video Coding & Processing

Jul 2021 - Aug 2021

- Designed convolutional neural networks (CNNs) to serve as loop filters, effectively reducing quantization noise in video coding.
- Applied the knowledge distillation (KD) technique to reduce the model size by around 40% while preserving comparable performance.

### Network Administrator

Taipei, Taiwan

2018 - 2020

Men's 1st Dormitory at National Taiwan University

• Troubleshooted Internet issues for 100+ students.

• Improved and maintained the automatic email sending system.

# **Extracurricular Experience**

#### Vice Leader of Men's Badminton Team

Taipei, Taiwan

National Taiwan University

- Silver medalist at the 2018 National Intercollegiate Athletic Games
- Bronze medalist at the 2019 National Intercollegiate Athletic Games

### **Skills**

**Languages:** Experienced in C/C++, Python, Java, and Matlab. Proficient in PyTorch and Tensorflow. **System administration**: Git, Linux, and Docker.