


# Tsung-Lin Tsou

 Personal website

 tsung-lin-tsou

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## About Me

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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

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### National Taiwan University

*B.S. in Computer Science and Information Engineering*

GPA: 4.23 / 4.3, **Ranking:** 3% [[transcript](#)]

Honors: Dean's List Award \* 4

**Taipei, Taiwan**

2017 - 2021

### National Taiwan University

*M.S. in Computer Science and Information Engineering*

Advisor: Prof. Winston H. Hsu

Lab Affiliation: Communication and Multimedia Lab (CMLab)

**Taipei, Taiwan**

2021 - 2023

## Publication

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### 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

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### Software Engineer Intern

*MediaTek, Video Coding & Processing*

- 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.

**Hsinchu, Taiwan**

Jul 2021 - Aug 2021

### Network Administrator

*Men's 1st Dormitory at National Taiwan University*

- Troubleshooted Internet issues for 100+ students.
- Improved and maintained the automatic email sending system.

**Taipei, Taiwan**

2018 - 2020

## Extracurricular Experience

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### Vice Leader of Men's Badminton Team

*National Taiwan University*

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

**Taipei, Taiwan**

## Skills

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**Languages:** Experienced in C/C++, Python, Java, and Matlab. Proficient in PyTorch and Tensorflow.

**System administration:** Git, Linux, and Docker.