

Tsung-Han Wu

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Education

National Taiwan University

M.S. in Computer Science

Taipei, Taiwan

2020–Present

Research Topic: Computer Vision, Machine Learning

Lab: Communications and Multimedia Laboratory (CMLab), Advisor: Prof. Winston H. Hsu

National Taiwan University

B.S. in Computer Science

Taipei, Taiwan

2016–2020

GPA: overall: 4.18, major: 4.24, graduate ranking: 6/117 (5%)

Honors: Dean's List Award * 3 (F'16, S'17, F'19)

Activities: Academic Department in Student Association in NTU CS (Members in 2017, Leader in 2018)

Research Experiences

Graduate Researcher, CMLab NTU, Advisor: Prof. Winston H. Hsu

Sep. 2020–Present

- Researched on **3D Deep Active Learning** to reduce 20x labeling effort on point cloud semantic segmentation. [\[ICCV'21\]](#) [\[Code\]](#) [\[Video\]](#)
 - Won 2021 Foxconn Technology Award. [\[Link\]](#)
- Researched on **Cross-Domain Active Learning** to achieve domain adaptation with minimum acquired labels on semantic segmentation. [\[arXiv Link\]](#)

Undergraduate Researcher, CMLab NTU, Advisor: Prof. Winston H. Hsu

Sep. 2018–Nov. 2020

- Researched on **Depth Completion** to improve depth map structure and quality. [\[ICCVW'19\]](#) [\[Code\]](#)
- Researched on **LiDAR Signal** to enhance the performance of **Stereo Matching** and **Depth Estimation**. [\[CVPR'21\]](#)

Publications

- **Tsung-Han Wu**, Yi-Syuan Liou, Shao-Ji Yuan, Hsin-Ying Lee, Tung-I Chen, Kuan-Chih Huang, Winston H. Hsu “D2ADA: Dynamic Density-aware Active Domain Adaptation for Semantic Segmentation” (Will appear in European Conference on Computer Vision, Oct 2022). [\[Paper\]](#) [\[Code\]](#)
- Kuan-Chih Huang, **Tsung-Han Wu**, Hung-Ting Su, Winston H. Hsu “MonoDTR: Monocular 3D Object Detection with Depth-Aware Transformer.” In IEEE Computer Vision and Pattern Recognition, Jun 2022. [\[Paper\]](#) [\[Code\]](#)
- **Tsung-Han Wu**, Yueh-Cheng Liu, Yu-Kai Huang, Hsin-Ying Lee, Hung-Ting Su, Ping-Chia Huang, Winston H. Hsu. “ReDAL: Region-based and Diversity-aware Active Learning for Point Cloud Semantic Segmentation.” In IEEE International Conference on Computer Vision, Oct 2021. [\[Paper\]](#) [\[Code\]](#) [\[Video\]](#)
- Yu-Kai Huang, Yueh-Cheng Liu, **Tsung-Han Wu**, Hung-Ting Su, Yu-Cheng Chang, Tsung-Lin Tsou, Yu-An Wang, and Winston H. Hsu. “S3: Learnable sparse signal superdensity for guided depth estimation.” In IEEE Computer Vision and Pattern Recognition, Jun 2021. [\[Paper\]](#)
- Yu-Kai Huang*, **Tsung-Han Wu***, Yueh-Cheng Liu, and Winston H. Hsu. “Indoor depth completion with boundary consistency and self-attention.” In IEEE International Conference on Computer Vision (ICCV) Workshops, Oct 2019. [\[Paper\]](#) [\[Code\]](#)

Work Experiences

NTUCSIE Network and System Administration Team

Taipei, Taiwan

System Administrator [\[Certificate Link\]](#)

Feb. 2018–Jun. 2020

- Supervisor: Prof. Hsin-Mu Tsai
- An experienced section chief of mail service, maintaining the mail services used by thousand of people and help users troubleshoot problems. Collaborate with the team to develop automated deployment toolkit. (2018-2019)
- An administrative coordinator of the system administration team. United the team to restructure system architecture and successfully improve system backup and monitoring. (2019-2020)

ASUS AICS Internship Program

Data Scientist Intern

Taipei, Taiwan

Jul. 2019–Aug. 2019

- Develop a toolkit that boost OCR performance by denoising and rectification.
- Train a deep neural network that outperforms their original object detection model.



Teaching Experiences

Network Administration and System Administration Laboratory

NTUCSIE

Teaching Assistant

2019, 2020 Spring

- Develop and set two programming homework. Graded the student works. Taught two one-hour lab, including shell script, partition, file-system and Linux kernel. (2019 Spring)
 - Won the “Best Teaching Assistant Awards” in the EECS department. [\[Link\]](#)
- Assist in course syllabus planning, and lead the teaching assistant team to complete all homework assignment and in-class lab. (2020 Spring)

Machine Learning

NTUEE

Teaching Assistant

2019 Fall

- Develop and set two programming homework. Graded the student works.

Algorithm Design and Analysis

NTUCSIE

Teaching Assistant

2018 Fall

- Develop and set four hand-written homework. Graded the student works.



Awards

Dean's List Award, at NTU CSIE (For top 5% students); 3x Recipient

Fall'16, Spring'17, Fall'19

Best Teaching Assistant Awards, at NTU EECS

Spring'19

Foxconn Technology Award (For top 19 applied students in Taiwan, 250K NTD scholarship)

Dec. 2021



Skills

Languages: Experienced in C, Python and capable of C++. Fluent in Tensorflow, PyTorch and Scikit-Learn.

System administration: Git, Linux, Ansible, QEMU-KVM and Docker.

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