Tsung-Han (Patrick) Wu

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Education

Ph.D. in Computer Science   *Aug. 2023 – Present*
University of California, Berkeley
- **GPA:** 4.0/4.0
- **Advisor:** Prof. Trevor Darrell, Prof. Joseph E. Gonzalez
- **Affiliation**: BAIR, Sky Computing Lab, LMArena

M.S. in Computer Science   *Sep. 2020 – Jun. 2022*
National Taiwan University (NTU)
- **GPA:** 4.2/4.3
- **Advisor:** Prof. Winston H. Hsu
- **Affiliation**: Communication and Multimedia Lab (CMLab)
- **Honors:** 2021 Foxconn Technology Award, 2022 IPPR Outstanding MS Thesis Award

B.S. in Computer Science   *Sep. 2016 – Jun. 2020*
National Taiwan University (NTU)
- **GPA:** 4.18/4.3 (Overall), 4.24/4.3 (CS); Rank: 6/117 (Top 5%)
- **Honors:** Dean's List Award x3 (F'16, S'17, F'19)

Research Interests

2023–Now | Trustworthy Models: hallucination reduction, false-premise handling, self-correction, model evaluation.
Key papers: Generate but Verify (arXiv '25), Search Arena (arXiv '25), Visual Haystacks (ICLR '25), See Say and Segment (CVPR '24), Self-correcting Diffusion (CVPR '24)

2019–2023 | Label- & Resource-Efficient Perception: active learning, domain adaptation, monocular 3D tasks.
Key papers: D2ADA (ECCV '22), ReDAL (ICCV '21), MonoDTR (CVPR '22), Depth Completion (ICCVW '19)

Selected Publications (* denotes equal contribution) [Google Scholar Page]

Preprints

[1] Generate, but Verify: Reducing Hallucination in Vision-Language Models with Retrospective Resampling
Tsung-Han Wu, Heekyung Lee, Jiaxin Ge, Joseph E. Gonzalez, Trevor Darrell, David M. Chan

[2] Search Arena: Analyzing Search-Augmented LLMs
Mihran Miroyan* **Tsung-Han Wu***, Logan King, Tianle Li, Jiayi Pan, Xinyan Hu, Wei-Lin Chiang, Anastasios N. Angelopoulos, Trevor Darrell, Narges Norouzi, Joseph E. Gonzalez

Conference Papers

[3] Visual Haystacks: A Vision-Centric Needle-In-A-Haystack Benchmark   ICLR 2025
Tsung-Han Wu, Giscard Biamby, Jerome Quenum, Ritwik Gupta, Joseph E. Gonzalez, Trevor Darrell, David M. Chan

[4] See, Say, and Segment: Teaching LMMs to Overcome False Premises   CVPR 2024
Tsung-Han Wu*, Giscard Biamby*, David M. Chan, Lisa Dunlap, Ritwik Gupta, Xudong Wang, Joseph E. Gonzalez, Trevor Darrell

[5] Self-correcting LLM-controlled Diffusion Models   CVPR 2024
Tsung-Han Wu*, Long Lian*, Joseph E. Gonzalez, Boyi Li, Trevor Darrell

[6] D2ADA: Dynamic Density-aware Active Domain Adaptation for Semantic Segmentation **ECCV 2022**
Tsung-Han Wu, Yi-Syuan Liou, Shao-Ji Yuan, Hsin-Ying Lee, Tung-I Chen, Kuan-Chih Huang, Winston H. Hsu

[7] MonoDTR: Monocular 3D Object Detection with Depth-Aware Transformer **CVPR 2022**
Kuan-Chih Huang, **Tsung-Han Wu**, Hung-Ting Su, Winston H. Hsu

[8] ReDAL: Region-based and Diversity-aware Active Learning for Point Cloud Semantic Segmentation **ICCV 2021**
Tsung-Han Wu, Yueh-Cheng Liu, Yu-Kai Huang, Hsin-Ying Lee, Hung-Ting Su, Ping-Chia Huang, Winston H. Hsu

Workshop Papers

[9] Indoor Depth Completion with Boundary Consistency and Self-Attention **ICCV 2019**
Yu-Kai Huang*, **Tsung-Han Wu***, Yueh-Cheng Liu, Winston H. Hsu **RLQ Workshop**

Teaching Experience

Teaching Assistant *2019, 2020 Spring*
CS2311: Network Administration and System Administration, NTU

- **Lab Instructor** (S'19): Taught shell script, and Linux kernel; created two assignments. **(Best TA Award)**
- **Head TA** (S'20): Led the TA team and co-planned syllabus; managed labs, assignments, and exams.

Teaching Assistant *2019 Fall*
EE5184: Machine Learning, NTU

- Designed two Kaggle-based programming assignments, several hand-written homework, and final exam problems.

Work Experience

Research Scientist Intern *May. 2024 – Aug. 2024*
FAIR, Meta Inc.
Supervisor: Prof. Kate Saenko

- Develop automated data mining frameworks for fine-grained segmentation tasks.

System Administrator [Certificate Link] *Feb. 2018 – Jun. 2020*
Department of Computer Science and Information Engineering (CSIE), NTU
Supervisor: Prof. Hsin-Mu Tsai

- **Head of Mail Services** (18–19): Maintained department-wide mail servers; automated service deployments.
- **SysAdmin Lead** (19–20): Improved system backup/monitoring; led the CS department's data center relocation.

Data Scientist Intern *Jul. 2019 – Aug. 2019*
AICS Team, ASUS Inc.
- Designed OCR enhancement tools and built detection models for document analysis tasks.

Awards and Service

Conference/Journal Reviewers, at CVPR, ECCV, ICCV, NeurIPS, TMM, and more *Apr. 2021 – Present*

Workshop Organizer, 4th Multimodal Foundation Models (MMFM) Workshop @ ICCV 2025 *May 2025 - Present*

IPPR Outstanding MS Thesis Award (Top 3 Computer Vision Master Thesis in Taiwan) *Aug. 2022*

Foxconn Technology Award (Top 19 applied students in Taiwan, 250K NTD scholarship) *Dec. 2021*

Best Teaching Assistant Awards, at NTU EECS *Spring'19*

Dean's List Award, at NTU CSIE (For top 5% students); 3x Recipient *Fall'16, Spring'17, Fall'19*