Hung-Chieh Fang

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Education

National Taiwan University (NTU) *Sept 2020 – Present*
B.S. in Computer Science and Information Engineering *Taipei, Taiwan*
Thesis: *"Uprooting Implicit Misalignment in Universal Domain Adaptation by Target-Integrated Representation Learning"*.

- Best Bachelor Thesis in College of Electrical Engineering and Computer Science, NTU, 2024

Advisor: Prof. Hsuan-Tien Lin

Selected Publications

(* indicates equal contribution)

[4] **Soft Separation and Distillation: Toward Global Uniformity in Federated Unsupervised Learning**
Hung-Chieh Fang, Hsuan-Tien Lin, Irwin king, and Yifei Zhang
In submission of ICCV, 2025 [PDF]

[3] **Tackling Dimensional Collapse toward Comprehensive Universal Domain Adaptation**
Hung-Chieh Fang, Po-Yi Lu, and Hsuan-Tien Lin
International Conference on Machine Learning (ICML), 2025 [PDF]

[2] **Integrating Self-supervised Speech Model with Pseudo Word-level Targets from Visually-grounded Speech Model**
Hung-Chieh Fang*, Nai-Xuan Ye*, Yi-Jen Shih, Puyuan Peng, Hsuan-Fu Wang, Layne Berry, Hung-yi Lee, and David Harwath
Workshop on Self-supervision in Audio, Speech and Beyond, ICASSP 2024 [PDF]

[1] **Open-Domain Conversational Question Answering with Historical Answers**
Hung-Chieh Fang*, Kuo-Han Hung*, Chao-Wei Huang, and Yun-Nung Chen
Asian Chapter of the Association for Computational Linguistics (AACL), 2022 [PDF]

Research Experience

Intelligent and Interactive Autonomous Systems Group (ILIAD), Stanford University *May 2025 – Present*
Visiting Student Researcher, advised by Prof. Dorsa Sadigh *Hybrid*

- Researching on **dexterous robot learning** (ongoing).

Robot Learning Lab (RLLab), NTU *Nov 2024 – Present*
Undergraduate Researcher, advised by Prof. Shao-Hua Sun *Taipei, Taiwan*

- Researching on **skill-based robot learning from videos** (ongoing).

Machine Intelligence & Social Computing (MISC) Lab, The Chinese University of Hong Kong *July 2024 – Jan 2025*
Visiting Student, Advisor: Prof. Irwin King, Dr. Yifei Zhang, Prof. Hsuan-Tien Lin *New Territories, Hong Kong*

- Researched on **federated unsupervised learning with non-IID data**. [4]
  - Identified the bottleneck of limited representation expressiveness in non-IID settings as a lack of inter-client uniformity.
  - Proposed soft separation of client embeddings to increase inter-client uniformity and distillation to transfer the projector's optimization benefits to the encoder representation.

Computational Learning Lab (CLLab), NTU *Feb 2023 – Mar 2025*
Undergraduate Researcher, Advisor: Prof. Hsuan-Tien Lin *Taipei, Taiwan*

- Researched on **universal domain adaptation**. [3]
  - Uncovered the dimensional collapse problem in universal domain adaptation.
  - Proposed using self-supervised loss to tackle dimensional collapse and improve robustness across scenarios.

Machine Intelligence & Understanding Lab (MiuLab), NTU *Mar 2022 - Jan 2023*
Undergraduate Researcher, Advisor: Prof. Yun-Nung (Vivian) Chen *Taipei, Taiwan*

- Researched on **open-domain conversational question answering**. [1]
  - Proposed combining the signal from historical answers with the noise-reduction ability of knowledge distillation to improve information retrieval and question answering.
  - Awarded honorable mention in the 2022 NTU CSIE Undergraduate Research Exhibition.

Teaching Experience

EE5100: Introduction to Generative Artificial Intelligence, NTU *Jan 2024 – June 2024*
Teaching Assistant *Taipei, Taiwan*

- Designed homework on the *interpretability and explainability of large language models*. [Link]

CSIE5043: Machine Learning, NTU *Feb 2023 – June 2023*
Teaching Assistant *Taipei, Taiwan*

- Co-designed ML algorithm homework about *theory of generalization* and a final project about *ordinal ranking* problems for 250+ students.
- Held weekly TA hours to guide students on their assignments.

Work Experience

MediaTek Research *Jan 2023 – Mar 2023*
Machine Learning Intern *Taipei, Taiwan*

- Designed *personally identifiable information removal* workflows for large language models.
- Studied the *best-arm identification problem in linear bandits*.

Cinnamon AI *July 2022 – Aug 2022*
Deep Learning Intern *Taipei, Taiwan*

- Developed a pipeline for meeting summarization with state-of-the-art deep learning models.

Selected Projects

Zero-shot Text Behavior Retrieval [Report] *Nov 2023 – Jan 2024*
Course Project of "Reinforcement Learning"

- Proposed a text-based approach to retrieve task-relevant data from an offline dataset *without* any expert demonstration for *imitation learning*.
- Enhanced retrieval accuracy and success rate across various simulated environments.

Visually-Grounded Self-Supervised Learning for Speech Processing [2] *Sept 2022 – Sept 2023*
Course Project of "Deep Learning for Human Language Processing" *Taipei, Taiwan*

- Proposed using vision as a surrogate for paired transcripts to enrich the semantic information in self-supervised speech models.
- Demonstrated the benefits of joint training with frame-level and word-level units for capturing semantic information.

Honors And Awards

Dean's List Award, NTU CSIE *2024*
Top 5% of the CSIE department

Principal's Award, NTU Bachelor's Thesis Award *2024*
Top 2 theses among all graduates & the best thesis in the EECS College

Honorable Mention, NTU CSIE Undergraduate Research Award *2022*
Top 6 research projects in the CSIE Department

Special Award, LINE FRESH Hackathon *2021*
Top 5 out of 300+ teams