Cheng-Han **Chiang** 姜成翰

SECOND-YEAR PH.D. STUDENT · NATIONAL TAIWAN UNIVERSITY

Taipei, Taiwan

✉ dcml0714@gmail.com | ⌂ d223302.github.io | ⊞ d223302 | 🐦 @dcml0714 | 🎓 Cheng-Han, Chiang

About me

I am a second-year Ph.D. student at National Taiwan University in Taipei, Taiwan. I am a member of the Speech Processing and Machine Learning (SPML) Lab, and I am very lucky to be advised by Prof. Hung-yi Lee. My main research interests broadly cover different aspects of natural language processing (NLP), mainly involving **self-supervised learning** (which has evolved into **large language models** these days), **interpretability** and analysis of NLP Models, **adversarial attacks**, and **human evaluation**.

Education

National Taiwan University (NTU)   *Taipei, Taiwan*

PH.D. STUDENT IN COMMUNICATION ENGINEERING   *Feb 2022 - Present*

- Advisor: Hung-yi Lee
- Direct pursuit of the Ph.D. degree
- M.S student in Graduate Institute of Communication Engineering (GICE) at National Taiwan University from Sep. 2020 to Jan. 2022

National Taiwan University (NTU)   *Taipei, Taiwan*

B.S. IN ELECTRICAL ENGINEERING   *Sept 2016 - June 2020*

Research Experience

Supervisor: Dr. Hung-yi Lee   *Taipei, Taiwan*

NTU SPEECH PROCESSING AND MACHINE LEARNING LAB.   *August. 2020 - Present*

- **Large language models** and **self-supervised learning** [2, 4, 7, 6, 5]
- **Automatic evaluations** and **human evaluations** in NLP [2, 4, 1, 9]
- **Adversarial attacks** in NLP [3, 10]

Publications

In Proceedings

[1] Why We Should Report the Details in Subjective Evaluation of TTS More Rigorously
Cheng-Han Chiang, Wei-Ping Huang, Hung-yi Lee
Proc. Interspeech 2023, 2023, Dublin, Ireland

[2] A Closer Look into Automatic Evaluation Using Large Language Models
Cheng-Han Chiang, Hung-yi Lee
Findings of the Association for Computational Linguistics: EMNLP 2023, 2023, Singapore

[3] Are Synonym Substitution Attacks Really Synonym Substitution Attacks?
Cheng-Han Chiang, Hung-yi Lee
Findings of the Association for Computational Linguistics: ACL 2023, 2023, Toronto, Canada

[4] Can Large Language Models Be an Alternative to Human Evaluation?
Cheng-Han Chiang, Hung-yi Lee
Proceedings of the 61th Annual Meeting of the Association for Computational Linguistics (Volume 1: Long Papers), 2023, Toronto, Canada

[5] Recent Advances in Pre-trained Language Models: Why Do They Work and How Do They Work
Cheng-Han Chiang, Yung-Sung Chuang, Hung-yi Lee
Proceedings of the 2nd Conference of the Asia-Pacific Chapter of the Association for Computational Linguistics and the 12th International Joint Conference on Natural Language Processing: Tutorial Abstracts, 2022, Taipei

[6] On the transferability of pre-trained language models: A study from artificial datasets
Cheng-Han Chiang, Hung-yi Lee
Proceedings of the AAAI Conference on Artificial Intelligence, 2022

[7] Pretrained Language Model Embryology: The Birth of ALBERT
Cheng-Han Chiang, Sung-Feng Huang, Hung-yi Lee
Proceedings of the 2020 Conference on Empirical Methods in Natural Language Processing (EMNLP), 2020, Online

Workshop Papers

[8] Revealing the Blind Spot of Sentence Encoder Evaluation by HEROS
Cheng-Han Chiang, Yung-Sung Chuang, James Glass, Hung-yi Lee
Proceedings of the 8th Workshop on Representation Learning for NLP, 2023, Toronto, Canada

[9] Re-Examining Human Annotations for Interpretable NLP
Cheng-Han Chiang, Hung-yi Lee
Explainable Agency in Artificial Intelligence Workshop of the AAAI Conference on Artificial Intelligence, 2022

Preprints

[10] Understanding, Detecting, and Separating Out-of-Distribution Samples and Adversarial Samples in Text Classification
Cheng-Han Chiang, Hung-yi Lee
*arXiv preprint arXiv:2204.04458 (2022)*2022

Professional Talks

Conference Tutorials

ICASSP 2023 *Rhodes Island, Greece*

Parameter-Efficient Learning for Speech and Language Processing: Adapters, Prompts, and Reprogramming *2023*
- Tutorial speaker for parameter-efficient learning in NLP

AACL-IJCNLP 2022 *Virtual*

Recent Advances in Pre-trained Language Models: Why Do They Work and How Do They Work *2022*
- Main organizer of the tutorial
- Tutorial website: `https://d223302.github.io/AACL2022-Pretrain-Language-Model-Tutorial/`
- Tutorial recordings: `https://youtu.be/thr4-hgLhi8`

Honors & Awards

2023	**Google PhD Fellowship**, Google	*Global*
2022	**Elite Doctoral Scholarship**, National Taiwan University	*Taipei, Taiwan*
2021	**Advanced Speech Technologies Scholarship**, National Taiwan University	*Taipei, Taiwan*

Professional Activities

Reviewer *2021-Present*
- Conference reviewer: ICML (2023), ACL (2022-2023), EACL (2023), AAAI (2023), NeurIPS (2022-2023), ICLR (2022-2024), EMNLP (2021-2023) and ARR
- Journal reviewer: Transactions on Audio, Speech and Language Processing: 2023

Teaching Assistants

Machine Learning: 2020 Spring, 2021 Spring, 2022 Spring, 2023 Spring *Instructor: Prof. Hung-yi Lee*

Teaching assistant *Feb. - Jun. 2020 - 2023*
- Gave a 2-hour lecture on diverse topics of large language models.
- Gave a 2-hour lecture on the recent advances in pre-trained language models. Video is available: `https://youtu.be/NzElV8jTNmw`
- Gave a 3-hour lecture on the adversarial attacks in NLP. Videos are available: `https://youtu.be/68lwXWFzCmg` and `https://youtu.be/68lwXWFzCmg`
- Built, designed, and maintained the course website: `https://speech.ee.ntu.edu.tw/~hylee/ml/2021-spring.php`
- Gave a 2-hour lecture on graph neural network. Video is available: `https://youtu.be/M9ht8vsVEw8`
- Designed a homework on meta-learning

Deep Learning for Human Language Processing 2020 Spring *Instructor: Prof. Hung-yi Lee*

Teaching assistant *Feb. 2020 - Jun. 2020*
- In charge of homework on voice conversion

Work Experience

National Taiwan University Speech Lab. *Taipei, Taiwan*

System Administrator and Network Administrator *Feb. 2021 - Jan. 2022*
- Managed a Slurm-based system with 20 GPUs