TING-YUN (CHARLOTTE) CHANG

Homepage: https://terarachang.github.io
Email: tingyun@usc.edu

RESEARCH INTERESTS

Natural Language Processing; Model Quantization; LLM Interpretation

EDUCATION

University of Southern California, USA *2021 - Present*
PhD student in Department of Computer Science

National Taiwan University, Taiwan *2018 - 2020*
M.S. in Department of Computer Science and Information Engineering

National Tsing Hua University, Taiwan *2014 - 2018*
B.S. in Department of Computer Science Rank 2/41; GPA 4.14/4.3

Tsinghua University, China *Fall 2015*
Exchange Student in Department of Computer Science and Technology

RESEARCH EXPERIENCE

University of Southern California California, USA
Research Assistant *2021 - Present*

- Advisors: Robin Jia and Jesse Thomason
- Studying why low-bit model quantization affects examples disproportionately [1]
- Understanding LLMs' (in)consistency to prompt variants by model decomposition [2]
- Localizing memorized data in LLMs [3]
- Stabilizing in-context learning by data valuation on demonstrations [4]
- Continual learning for vision-language tasks [5]

Google DeepMind New York, USA
Research Intern *Summer 2025*

- Studying the interplay between post-training and model quantization

Amazon AWS AI California, USA
Applied Scientist Intern *Summer 2024*

- Improving the safety of LLMs against jailbreaking attacks

Academia Sinica Taipei, Taiwan
Research Assistant *2020 - 2021*

- Advisor: Chi-Jen Lu
- Understanding pre-finetuning of language models [6]
- Compressing large image generators [9]

Amazon Alexa AI California, USA
Applied Scientist Intern *Spring 2020*

- Improving common sense in pretrained language models [7, 8]

National Taiwan University Taipei, Taiwan
Research Assistant *2018 - 2020*

- Advisor: Yun-Nung (Vivian) Chen
- Probing contextualized word embeddings with the definitions of multisense words [10]
- Automated clinical note diagnosis [11]

PUBLICATIONS

[1] **Ting-Yun Chang**, Muru Zhang, Jesse Thomason, and Robin Jia. *Why Do Some Inputs Break Low-Bit LLM Quantization?* EMNLP 2025.

[2] **Ting-Yun Chang**, Jesse Thomason, and Robin Jia. *When Parts Are Greater Than Sums: Individual LLM Components Can Outperform Full Models.* EMNLP 2024.

[3] **Ting-Yun Chang**, Jesse Thomason, and Robin Jia. *Do Localization Methods Actually Localize Memorized Data in LLMs? A Tale of Two Benchmarks.* NAACL 2024.

[4] **Ting-Yun Chang** and Robin Jia. *Data Curation Alone Can Stabilize In-context Learning.* ACL 2023.

[5] Tejas Srinivasan, **Ting-Yun Chang**, Leticia Leonor Pinto Alva, Georgios Chochlakis, Mohammad Rostami, and Jesse Thomason. *CLiMB: A Continual Learning Benchmark for Vision-and-Language Tasks.* NeurIPS Datasets and Benchmarks Track 2022.

[6] **Ting-Yun Chang** and Chi-Jen Lu. *Rethinking Why Intermediate-Task Fine-Tuning Works.* Findings of EMNLP 2021.

[7] **Ting-Yun Chang**, Yang Liu, Karthik Gopalakrishnan, Behnam Hedayatnia, Pei Zhou, and Dilek Hakkani-Tür. *Go Beyond Plain Fine-tuning: Improving Pretrained Models for Social Commonsense.* IEEE SLT 2021.

[8] **Ting-Yun Chang**, Yang Liu, Karthik Gopalakrishnan, Behnam Hedayatnia, Pei Zhou, and Dilek Hakkani-Tür. *Incorporating Commonsense Knowledge Graph in Pretrained Models for Social Commonsense Tasks.* DeeLIO Workshop at EMNLP 2020 (**best paper award**).

[9] **Ting-Yun Chang** and Chi-Jen Lu. *TinyGAN: Distilling BigGAN for Conditional Image Generation.* Asian Conference on Computer Vision 2020.

[10] **Ting-Yun Chang** and Yun-Nung Chen. *What Does This Word Mean? Explaining Contextualized Embeddings with Natural Language Definition.* EMNLP-IJCNLP 2019.

[11] Shang-Chi Tsai, **Ting-Yun Chang**, and Yun-Nung Chen. *Leveraging Hierarchical Category Knowledge for Data-Imbalanced Multi-Label Diagnostic Text Understanding.* LOUHI Workshop at EMNLP-IJCNLP 2019.

[12] Chao-Chun Liang, Shih-Hong Tsai, **Ting-Yun Chang**, Yi-Chung Lin, and Keh-Yih Su. *A Meaning-based English Math Word Problem Solver with Understanding, Reasoning and Explanation.* COLING 2016: System Demonstrations.

TEACHING EXPERIENCE

Teaching Assistant
USC CS544 Applied Natural Language Processing, Fall 2024. Instructor: Swabha Swayamdipta.
USC CS 467: Introduction to Machine Learning, Spring 2023. Instructor: Robin Jia.
NTU CS: Applied Deep Learning, Spring 2019. Instructor: Yun-Nung (Vivian) Chen.

PROGRAMMING

Languages: Python, C/C++, Java
Frameworks: PyTorch, TensorFlow, scikit-learn