TING-YUN (CHARLOTTE) CHANG

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RESEARCH INTERESTS

Natural Language Processing; Inference Efficiency; LLM Interpretation

EDUCATION

University of Southern California, USA *2021 - Spring 2026*
PhD student in Department of Computer Science
(All but dissertation)

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
· KV cache compression with sparse attention and quantization (ongoing project)
· Studying why low-bit model quantization affects examples disproportionately [1]
· Improving LLMs' consistency to prompt variants by model decomposition [3]
· Localizing and unlearning memorized data in LLMs [4]
· Stabilizing in-context learning by data valuation on demonstrations [5]
· Continual learning for vision-language tasks [6]

Google DeepMind New York, USA
Research Intern *Summer 2025*
· Studying the interplay between RL and post-training 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*
· PI: Chi-Jen Lu
· Understanding pre-finetuning of language models [7]
· Compressing large image generators [10]

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

· Improving common sense in pretrained language models [8, 9]

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

· Advisor: Yun-Nung (Vivian) Chen
· Probing contextualized word embeddings with the definitions of multisense words [11]
· Automated clinical note diagnosis [12]

PUBLICATIONS

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

[2] Ming Zhong, Xiang Zhou, **Ting-Yun Chang**, Qingze Wang, Nan Xu, Xiance Si, Dan Garrette, Shyam Upadhyay, Jeremiah Liu, Jiawei Han, Benoit Schillings, and Jiao Sun. *Vibe Checker: Aligning Code Evaluation with Human Preference*. arXiv 2025. (Internship Project)

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

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

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

[6] 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.

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

[8] **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.

[9] **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**).

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

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

[12] 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.

[13] 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.

PROGRAMMING

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