

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

Research Assistant

Taipei, Taiwan

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