JUSTIN CHIH-YAO CHEN

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EDUCATION

The University of North Carolina at Chapel Hill

Ph.D. student in Computer Science. Aug. 2023 - Present

National Taiwan University

Master of Data Science. GPA: 4.10 / 4.30 Sep. 2020 - Jun. 2022

National Cheng Kung University

Bachelor of Statistics, Double Major in Computer Science. GPA: 3.93 / 4.30 Sep. 2016 - Jun. 2020

EXPERIENCE

MURGe-Lab NLP Group

Research Assistant (Advisor: Mohit Bansal)

Improving LLM reasoning ability and efficiency, multi-agent collaboration for reasoning

Salesforce AI Research Palo Alto, CA

Research Intern (Mentors: Xiangyu Peng, Prafulla Kumar Choubey, Jason Wu)

Pushing the boundaries of LLM reasoning via post-training with self-generated hints

Google Cloud AI Research

Student Researcher (Mentors: Chen-Yu Lee, Zifeng Wang)

Enhancing the reasoning of LLMs by strengthening their reverse-thinking capabilities

Institute of Information Science, Academia Sinica

Research Assistant (Advisor: Lun-Wei Ku)

Work on attractive headline generation, representation learning and vision question generation

Institute of Data Science, National Cheng Kung University

Research Assistant (Advisor: Cheng-Te Li)

Work on zero-shot relation extraction and anomaly detection

Jul. 2020 - Dec. 2022

Jun. 2018 - Jun. 2020

PUBLICATIONS (*CO-FIRST AUTHOR)

[1] Justin Chih-Yao Chen, Becky Xiangyu Peng, Prafulla Kumar Choubey, Kung-Hsiang Huang, Jiaxin Zhang, Mohit Bansal, Chien-Sheng Wu "Nudging the Boundaries of LLM Reasoning." Submitted to ICLR 2026. [Paper]

[2] Justin Chih-Yao Chen*, Sukwon Yun*, Elias Stengel-Eskin*, Tianlong Chen, Mohit Bansal "Symbolic Mixture-of-Experts: Adaptive Skill-based Routing for Heterogeneous Reasoning." Submitted to ICLR 2026. [Paper] [Code]

[3] Justin Chih-Yao Chen, Zifeng Wang, Hamid Palangi, Rujun Han, Sayna Ebrahimi, Long Le, Vincent Perot, Swaroop Mishra, Mohit Bansal, Chen-Yu Lee, Tomas Pfister "Reverse Thinking Makes LLMs Stronger Reasoners." The 2025 Conference of the Nations of the Americas Chapter of the Association for Computational Linguistics (NAACL 2025). [Paper] [Code]

[4] Justin Chih-Yao Chen, Archiki Prasad, Swarnadeep Saha, Elias Stengel-Eskin and Mohit Bansal. "MAgICoRe: Multi-Agent, Iterative, Coarse-to-Fine Refinement for Reasoning." The 2025 Conference on Empirical Methods in Natural Language Processing (EMNLP 2025). [Paper] [Code]

[5] Justin Chih-Yao Chen, Swarnadeep Saha and Mohit Bansal. "ReConcile: Round-Table Conference Improves Reasoning via Consensus among Diverse LLMs." The 62st Annual Meeting of the Association for Computational Linguistics (ACL 2024). [Paper] [Code]

[6] Justin Chih-Yao Chen*, Swarnadeep Saha*, Elias Stengel-eskin and Mohit Bansal. "MAGDI: Structured Distillation of Multi-Agent Interaction Graphs Improves Reasoning in Smaller Language Models." The Forty-Second International Conference on Machine Learning (ICML 2024). [Paper] [Code]

Taipei, Taiwan

Chapel Hill, NC

Tainan, Taiwan

Chapel Hill, NC Aug. 2023 - Present

May. 2025 - Aug. 2025

Sunnyvale, CA

Jun. 2024 - Sep. 2024

Taipei, Taiwan

Tainan, Taiwan

- [7] **Justin Chih-Yao Chen**, Tun-Min Hung, Lun-Wei Ku. "Label-Aware Hyperbolic Embeddings for Fine-grained Emotion Classification." The 61st Annual Meeting of the Association for Computational Linguistics (**ACL 2023**). [Paper] [Code]
- [8] **Justin Chih-Yao Chen**, Dennis Wu, Lun-Wei Ku. "HonestBait: Forward References for Attractive but Faithful Headline Generation." The 61st Annual Meeting of the Association for Computational Linguistics (**ACL Findings 2023**). [Paper]
- [9] Justin Chih-Yao Chen and Cheng-Te Li. "ZS-BERT: Towards Zero-Shot Relation Extraction with Attribute Representation Learning." The Annual Conference of the North American Chapter of the Association for Computational Linguistics (NAACL 2021). [Paper] [Code]

HONOR & AWARDS

College Student Research Creativity Award (Out of 2,689 Research)

2020

Ministry of Science and Technology, Taiwan

Honorable Mention Award, Big Data and Business Analysis Competition

2018

Department of Finance, National Sun Yat-sen University

Cathay United Bank Undergraduate Scholarship

2017

Cathay Life Insurance Company

Academic Excellence Award (Top 10%)

2016

Department of Statistics, National Cheng Kung University

REFERENCE

Mohit Bansal (mbansal@cs.unc.edu)

Department of Computer Science, UNC Chapel Hill

Relationship: PhD advisor, director of the Multimodal Understanding, Reasoning, and Generation for Language Lab

Jason Wu (wu.jason@salesforce.com)

AI Research, Salesforce

Relationship: internship mentor, director at Salesforce AI Research

Chen-Yu Lee (chenyulee@google.com)

Cloud AI Research, Google

Relationship: internship mentor, staff research scientist and manager

Lun-Wei Ku (lwku@iis.sinica.edu.tw)

Institute of Information Science, Academic Sinica

Relationship: master's advisor, director of the Natural Language Processing and Sentiment Analysis Lab

Cheng-Te Li (chengte@ncku.edu.tw)

Institute of Data Science, National Cheng Kung University

Relationship: undergraduate advisor, director of the Networked Artificial Intelligence Lab