

JUSTIN CHIH-YAO CHEN

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EDUCATION

The University of North Carolina at Chapel Hill

Ph.D. student in Computer Science.

Chapel Hill, NC

Aug. 2023 – Present

National Taiwan University

Master of Data Science. GPA: 4.10 / 4.30

Taipei, Taiwan

Sep. 2020 – Jun. 2022

National Cheng Kung University

Bachelor of Statistics, Double Major in Computer Science. GPA: 3.93 / 4.30

Tainan, Taiwan

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

Chapel Hill, NC

Aug. 2023 – Present

Google Cloud AI Research

Student Researcher (Advisors: [Chen-Yu Lee](#), [Zifeng Wang](#))

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

Sunnyvale, CA

Jun. 2024 – Sep. 2024

Institute of Information Science, Academia Sinica

Research Assistant (Advisor: [Lun-Wei Ku](#))

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

Taipei, Taiwan

Jul. 2020 – Dec. 2022

Institute of Data Science, National Cheng Kung University

Research Assistant (Advisor: [Cheng-Te Li](#))

Work on zero-shot relation extraction and anomaly detection

Tainan, Taiwan

Jun. 2018 – Jun. 2020

PUBLICATIONS (*CO-FIRST AUTHOR)

- [1] **Justin Chih-Yao Chen**, Archiki Prasad, Swarnadeep Saha, Elias Stengel-eskin and Mohit Bansal. “MAGICoRe: Multi-Agent, Iterative, Coarse-to-Fine Refinement for Reasoning.” Arxiv Preprint 2024. [\[Paper\]](#) [\[Code\]](#)
- [2] **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**). [\[Paper\]](#) [\[Code\]](#)
- [3] **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**). [\[Paper\]](#) [\[Code\]](#)
- [4] Yen-Wen Lu, **Chih-Yao Chen**, Cheng-Te Li. “Dual Graph Networks with Synthetic Oversampling for Imbalanced Rumor Detection on Social Media.” International World Wide Web Conference (**WWW 2024**). [\[Paper\]](#)
- [5] Nicholas Collin Suwono, **Chih-Yao Chen**, Tun Min Hung, Ting-Hao Kenneth Huang, I-Bin Liao, Yung-Hui Li, Lun-Wei Ku, Shao-Hua Sun. “Location-Aware Visual Question Generation with Lightweight Models.” The 2023 Conference on Empirical Methods in Natural Language Processing (**EMNLP 2023**). [\[Paper\]](#) [\[Code\]](#)
- [6] **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**). [\[Paper\]](#) [\[Code\]](#)
- [7] **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**). [\[Paper\]](#)

- [8] Yi-Zhan Xu*, **Chih-Yao Chen*** and Cheng-Te Li. “SUVR: Search-based Unsupervised Visual Representation Learning.” IEEE International Conference on Acoustics, Speech and Signal Processing 2023 (**ICASSP 2023**). [\[Paper\]](#)
- [9] **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**). [\[Paper\]](#) [\[Code\]](#)
- [10] Yu-Che Tsai, **Chih-Yao Chen**, Shao-Lun Ma, Pei-Chi Wang, You-Jia Chen, Yu-Chieh Chang, and Cheng-Te Li. “FineNet: A Joint Convolutional and Recurrent Neural Network Model to Forecast and Recommend Anomalous Financial Items.” ACM International Conference on Recommender Systems (**RecSys 2019**). [\[Paper\]](#)

HONOR & AWARDS

College Student Research Creativity Award (Out of 2,689 Research) <i>Ministry of Science and Technology, Taiwan</i>	2020
Honorable Mention Award, Big Data and Business Analysis Competition <i>Department of Finance, National Sun Yat-sen University</i>	2018
Cathay United Bank Undergraduate Scholarship <i>Cathay Life Insurance Company</i>	2017
Academic Excellence Award (Top 10%) <i>Department of Statistics, National Cheng Kung University</i>	2016

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

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