Yichen **Jiang**

100 Columbia Place Dr, Chapel Hill, North Carolina, 27516

 (984)-215-8386 | ✉ yichenj@cs.unc.edu | 🏠 www.jiang-yichen.io | ⬛ jiangycTarheel | 💼 yichen-jiang-943355121

Education

University of North Carolina at Chapel Hill	*Chapel Hill, NC*
PhD in Computer Science, advised by Prof. Mohit Bansal	*Aug. 2019 - Exp. May. 2024*
University of North Carolina at Chapel Hill	*Chapel Hill, NC*
M.S. in Computer Science, advised by Prof. Mohit Bansal	*Aug. 2018 - May. 2019*
University of North Carolina at Chapel Hill	*Chapel Hill, NC*
B.S. in Computer Science, Minor in Math and 2nd Minor in Statistics. Overall GPA: 3.86, Major GPA: 3.95.	*Aug. 2014 - May. 2018*

Honor

Apple Scholars in AI/ML PhD Fellowship — *Cupertino, CA*

Apple Inc. — *March. 2022*

- Recognized for my research in interpreting and inducing systematic compositionality in neural NLP models.

Graduation with the Highest Honor and the Highest Distinction — *Chapel Hill, NC*

Department of Computer Science, UNC — *May. 2018*

- Complete an honor thesis "Augmenting Neural Encoder-Decoder Model for Natural Language Generation Tasks".
- Present the work in the department open day and UNC undergraduate research symposium.
- Completed the undergraduate program with higher than 3.8 GPA.

Publication

2024	**Hierarchical and Dynamic Prompt Compression for Efficient Zero-shot API Usage** **Yichen Jiang**, Marco Del Vecchio, Mohit Bansal, and Anders Johannsen, *Findings of EACL 2024*	*Malta*
2023	**Data Factors for Better Compositional Generalization** Xiang Zhou, **Yichen Jiang**, and Mohit Bansal, *EMNLP 2023*	*Singapore*
2022	**Mutual Exclusivity Training and Primitive Augmentation to Induce Compositionality** **Yichen Jiang***, Xiang Zhou*, and Mohit Bansal, *EMNLP 2022*	*Abu Dhabi, UAE*
2021	**Inducing Transformer's Compositional Generalization Ability via Auxiliary Sequence Prediction Tasks** **Yichen Jiang** and Mohit Bansal, *EMNLP 2021*	*Dominican Republic*
2021	**Learning and Analyzing Generation Order for Undirected Sequence Models** **Yichen Jiang** and Mohit Bansal, *Findings of EMNLP 2021*	*Dominican Republic*
2021	**Structural Biases for Improving Transformers on Translation into Morphologically Rich Languages** Paul Soulos, Sudha Rao, Caitlin Smith, Eric Rosen, Asli Celikyilmaz, R Thomas McCoy, **Yichen Jiang**, Coleman Haley, Roland Fernandez, Hamid Palangi, Jianfeng Gao, and Paul Smolensky, *LoResMT 2021*	*Remote*
2021	**Enriching Transformers with Structured Tensor-Product Representations for Abstractive Summarization** **Yichen Jiang**, Asli Celikyilmaz, Paul Smolensky, Paul Soulus, Sudha Rao, Hamid Palangi, Roland Fernandez, Caitlin Smith, Mohit Bansal and Jianfeng Gao, *NAACL 2021*	*Remote*
2020	**HoVer: A Dataset for Many-Hop Fact Extraction And Claim Verification** **Yichen Jiang***, Shikha Bordia*, Zheng Zhong, Charles Dognin, Maneesh Singh and Mohit Bansal, *Findings of EMNLP 2020*	*Remote*
2019	**Self-Assembling Modular Networks for Interpretable Multi-Hop Reasoning** **Yichen Jiang** and Mohit Bansal, *EMNLP 2019*	*Hong Kong*
2019	**Avoiding Reasoning Shortcuts: Adversarial Evaluation, Training, and Model Development for Multi-Hop QA** **Yichen Jiang** and Mohit Bansal, *ACL 2019*	*Florence, Italy*

2019	**Explore, Propose, and Assemble: An Interpretable Model for Multi-Hop Reading Comprehension**	*Florence, Italy*
	Yichen Jiang*, Nitish Joshi*, Yen-chun Chen and Mohit Bansal, *ACL 2019*	
2018	**Closed-book Training to Improve Summarization Encoder Memory**	*Brussels, Belgium*
	Yichen Jiang and Mohit Bansal, *EMNLP 2018*	

Work Experience

UNC-NLP   *Chapel Hill, NC*

Research Assistant   *Aug. 2017 - PRESENT*

- Built interpretable Neural Network models to tackle some of the most challenging language tasks like summarization and QA.
- Published several academic papers in NLP conferences including NAACL, ACL, and EMNLP.

Apple AIML   *Seattle, WA*

Research Intern, advised by Marco Del Vecchio, and Dr. Anders Johannsen   *May. 2023 - Sept. 2023*

- Worked on a research project to improve the efficiency of Large Language Models in calling API by compressing API documentation.
- Published the paper "Hierarchical and Dynamic Prompt Compression for Efficient Zero-shot API Usage" in EACL 2024.

Amazon Alexa AI   *Sunnyvale, CA*

Research Intern, advised by Dr. Di Jin, Dr. Mahdi Namazifar, Dr. Yang Liu, and Dr. Dilek Hakkani-Tur   *May. 2022 - Oct. 2022*

- Improving dialogue model's ability to use long-term memory.

Facebook AI Research   *Menlo Park, CA (Remote)*

Research Intern, advised by Dr. Barlas Oguz, Dr. Scott Yih, and Dr. Yashar Mehdad   *May. 2021 - Oct. 2021*

- Analyzing QA datasets to improve the commonsense reasoning capabilities of models.

Microsoft Research AI   *Redmond, WA (Remote)*

Research Intern, advised by Dr. Asli Celikyilmaz, Dr. Paul Smolensky, Dr. Hamid Palangi, Roland Fernandez, and Dr. Jianfeng Gao   *May. 2020 - Nov. 2020*

- Worked to improve and analyze TP-Transformer architecture on summarization tasks.
- Published the paper "Enriching Transformers with Structured Tensor-Product Representations for Abstractive Summarization" in NAACL 2021.

Verisk Analytics   *Jersey City, NJ*

Research Intern, advised by Dr. Maneesh Singh   *May. 2019 - Aug. 2019*

- Constructed a many-hop fact retrieval and fact verification dataset HoVer, published at EMNLP 2020.
- Worked on NLP-related data analysis research projects in Verisk AI, providing better NLP solutions to Verisk's customers.

Emerging Technology Lab, School of Media and Journalism, UNC   *Chapel Hill, NC*

Software Engineer & AI App Developer   *Aug. 2017 - May. 2018*

- Developed a chatbot with IBM Watson, which could answer questions regarding news in North Carolina coastal area centered at Wilmington.

Other Activities

Department of Computer Science Open Day   *Chapel Hill, NC*

Volunteer / Presenter   *Sep. 2018*

- Volunteer at the Department Open day and demo my research project to high school students.

UNC Information Technology Service Helping Desk   *Chapel Hill, NC*

Student Consultant   *Sep. 2016 - May. 2018*

- Worked as a student consultant to help resolve IT-related problems for UNC students, staff, and faculty.

Skills

Programming

- Proficient with programming languages including Python, Javascript, Java, and C.
- Proficient with Deep Learning Deep Learning Libraries including Tensorflow and PyTorch.