

Chao Zhao

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🔗 <https://zhaochaocs.github.io/>

🎓 Education

University of North Carolina at Chapel Hill

Ph.D. in Computer Science

📅 Jan 2020 - Aug 2023

◦ Chapel Hill, NC, USA

- Research Field: Text summarization; natural language generation;
- Thesis: Text Summarization Under Low Supervision
- Committee: Snigdha Chaturvedi (advisor), Mohit Bansal, Kathleen McKeown, Colin Raffel, Soumyadip Sengupta

University of California, Santa Cruz

M.Sc in Computer Science

📅 Sep 2018 - Dec 2019

◦ Santa Cruz, CA, USA

- Natural language understanding and generation.

Harbin Institute of Technology

M.Sc in Computer Technology, School of Computer Science and Technology

📅 Sep 2016 - Jun 2018

◦ Harbin, China

- Natural language processing, knowledge graph, health informatics

Harbin Institute of Technology

B.E. in Flight Vehicle Design and Engineering, School of Astronautics

📅 Sep 2012 - Jun 2016

◦ Harbin, China

🏢 Internships

Subjective-Knowledge based Conversational Modeling

Applied Scientist Intern, Amazon Alexa AI

📅 May 2022 - Aug 2022

◦ Sunnyvale, CA

- Mentored by Seokhwan Kim, Spandana Gella, Yang Liu, and Dilek Hakkani-Tur;
- Developed a task-oriented dialogue response generation dataset that incorporates subjective user opinions;
- Proposed an ABSA-based approach to improve the relevancy and faithfulness of the generated response;
- Submitted work to ACL 2023.

Knowledge Extraction and Pre-training for Dialogue Understanding

Research Intern, Tencent AI Lab

📅 May 2021 - Aug 2021

◦ Bellevue, WA

- Mentored by Wenlin Yao, Dian Yu, Kaiqiang Song, Dong Yu, and Jianshu Chen;
- Presented a novel pre-training objective and corresponding dataset for dialogue comprehension and summarization;
- Demonstrated superior performance compared to the state-of-the-art on downstream tasks under zero-shot setting;
- Paper accepted and published in ACL 2022.

News Update Summarization

Applied Scientist Intern, Amazon AWS

📅 May 2020 - Aug 2020

◦ NYC, NY

- Mentored by Miguel Ballesteros, Muthu Kumar Chandrasekaran, and Kathleen McKeown;
- Developed a hierarchical method for multi-document summarization that achieved state-of-the-art results;
- Utilized various techniques to eliminate redundancy in update summarization;
- Paper accepted and published in Findings of NAACL 2022;

Knowledge-Enhanced BERT Encoding

Research Intern, Baidu Knowledge Graph

📅 June 2019 - Sep 2019

◦ Beijing, China

- Mentored by Min Zhao;
- Created a whole-word tagging scheme for natural language to incorporate linguistic and commonsense knowledge;
- Utilized the knowledge to improve the performance of pre-trained models on natural language understanding.

Selected Publications

Note: The complete list of publications can be found in [*Google Scholar*].

- **Chao Zhao**, Faeze Brahman, Kaiqiang Song, Wenlin Yao, Dian Yu, Snigdha Chaturvedi. “NarraSum: A Large-Scale Dataset for Abstractive Narrative Summarization” *Findings of EMNLP 2022*. Dec 2022.
- **Chao Zhao**, Faeze Brahman, Tenghao Huang, Snigdha Chaturvedi. “Revisiting Generative Commonsense Reasoning: A Pre-Ordering Approach” *Findings of NAACL 2022*. July 2022.
- **Chao Zhao**, Tenghao Huang, Somnath Basu Roy Chowdhury, Muthu Kumar Chandrasekaran, Kathleen McKeown, Snigdha Chaturvedi. “Read Top News First: A Document Reordering Approach for Multi-Document News Summarization” *Findings of ACL 2022*. May 2022.
- **Chao Zhao**, Wenlin Yao, Dian Yu, Kaiqiang Song, Dong Yu, Jianshu Chen. “Learning-by-Narrating: Narrative Pre-Training for Zero-Shot Dialogue Comprehension” *60th annual meeting of the Association for Computational Linguistics*. May 2022.
- Somnath Basu Roy Chowdhury, **Chao Zhao**, Snigdha Chaturvedi. “Unsupervised Extractive Opinion Summarization Using Sparse Coding” *60th annual meeting of the Association for Computational Linguistics*. May 2022.
- **Chao Zhao**, Marilyn Walker, Snigdha Chaturvedi. “Bridging the Structural Gap Between Encoding and Decoding for Data-To-Text Generation” *58th annual meeting of the Association for Computational Linguistics*. July 2020.
- **Chao Zhao**, Snigdha Chaturvedi. “Weakly-Supervised Opinion Summarization By Leveraging External Information” *Thirty-Fourth AAAI Conference on Artificial Intelligence*. Feb 2020.
- **Chao Zhao**, Jingchi Jiang, Yi Guan, Xitong Guo, and Bin He. “EMR-based medical knowledge representation and inference via Markov random fields and distributed representation learning.” *Artificial Intelligence in Medicine*, 87 (2018): 49-59.
- **Chao Zhao**, Jingchi Jiang, Zhiming Xu, and Yi Guan. “A study of EMR-based medical knowledge network and its applications.” *Computer Methods and Programs in Biomedicine* 143 (2017): 13-23.
- **Chao Zhao**, Min Zhao, and Yi Guan. “Constructing a Hierarchical User Interest Structure based on User Profiles.” *2017 IEEE 17th International Conference on Data Mining Workshops (ICDMW)*. pages 156–162, Nov 2017.
- Zhipeng Jiang*, **Chao Zhao***, Bin He, Yi Guan, and Jingchi Jiang. “De-identification of medical records using conditional random fields and long short-term memory networks.” *Journal of Biomedical Informatics*, S75 (2017): S43-S53, **co-first author**

Skills

- Programming: Python (pytorch, tensorflow, keras, theano) > Java > Matlab > C > C++
- Others: Git, Linux, SQL, Hadoop, L^AT_EX, HTML, CSS

Teaching

- TA for CMPS12B: Introduction to Data Structures, UCSC Fall 2018

Service

- Program Committee Member/Reviewer: CoNLL 2019, AAAI 2019, NAACL 2019, AAAI 2020, AAAI 2021, ACL 2021, NAACL 2021, EMNLP 2021, WNU 2021, AAAI 2022, ACL 2022, NAACL 2022, EMNLP 2022, AAAI 2022, WNU 2022, AAAI 2023, creativeAI 2023, ACL 2023, KDD 2023, ICASSP 2023, NewSUMM 2023, ARR Oct 2021 onwards
- Organization Committee Member: DSTC-11 Task 5

Selected Awards

- The Regents’ Fellowship (University of California, Santa Cruz) Dec 2018
- Innovation Scholarship (Ministry of Industry and Information Technology, China) Dec 2017
- National Scholarship for Graduate Students (Ministry of Education, China) Nov 2017
- First-level National Prize for China Undergraduate Mathematical Modeling Sep 2015
- National Scholarship for Undergraduate Students (Ministry of Education, China) Sep 2014