

Qi (Vicki) Zeng

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Education

- 2019 - **University of Illinois Urbana-Champaign**, Illinois, United States
Ph.D. in Computer Science, Advisor: Prof. Heng Ji, expected Dec 2023
M.S. in Computer Science (on the way to Ph.D.)
- 2013 - 2018 **Peking University**, Beijing, China
B.S. in Information Management and Information System

Research Interests

My research interests lie in the general area of Natural Language Processing.

Large Language Models: In-Context Learning, Iterative Self-refinement, Hallucination Mitigation, LLM Evaluation, Arithmetic/Commonsense Reasoning, Fast Attentions for Long Context

Text Summarization: Scientific Opinion Summarization, Consistency Improvement

Information Extraction: Event Graph Construction, Event Graph Representation Learning, Event Argument Extraction, Event Temporal Relation Extraction, Multimedia Event Extraction, Event Schema Curation, Event Schema Induction, Event Schema Matching

Internships

- Summer 2023 **Google DeepMind**, CA, United States
Research Intern on Brain Star team
- Summer 2022 **Amazon**, CA, United States
Applied Scientist Intern on Amazon Search Query Understanding team
- Summer 2021 **Microsoft Research**, Remote, United States
Research Intern on Cognitive Services Research Team
- Summer 2020 **Allen Institute for Artificial Intelligence (AI2)**, Remote, United States
Research Intern on AllenNLP team
- Summer 2019 **ByteDance AI Lab**, Shanghai, China
Research Intern at MLNLP Group
- Spring 2018 **Microsoft Research Asia**, Beijing, China
Research Intern at Big Data Mining Group
- Spring 2017 **Microsoft Search Technology Center Asia**, Beijing, China
Machine Learning Engineer Intern at Xiaolce Group

Selected Projects

- 2023 **Meta-review Generation with Large Language Models**
Construct a new paper meta-review dataset, propose a Checklist-guided Iterative Introspection approach, and construct a comprehensive evaluation framework
- 2023 **Consistent Document Summarization with Energy Functions**
Formalize the categorization of consistency in document summarization into faithfulness, factuality, and self-supportiveness, and propose the EnergySum framework, which includes consistency-constrained energy scorers and joint inference
- 2022 **Consistent Document-level Event Argument Extraction**
Formulate event argument consistency as the constraints from event-event relations, and propose the Event-Aware Argument Extraction model with augmented context for training and inference

Publications

[Google Scholar] [DBLP] [Semantic Scholar] * indicates equal contribution

- In Submission **EnergySum: Improving Consistency for Summarization with Energy Functions**
Qi Zeng, Qingyu Yin, Zheng Li, Yifan Gao, Sreyashi Nag, Zhengyang Wang, Heng Ji, Chao Zhang
- arXiv **Meta-review Generation with Checklist-guided Iterative Introspection**
Qi Zeng*, Mankeerat Sidhu*, Hou Pong Chan, Lu Wang, Heng Ji
- arXiv **SmartBook: AI-Assisted Situation Report Generation**
Revanth Gangi Reddy, Yi R. Fung, Qi Zeng, Manling Li, Ziqi Wang, Paul Sullivan, Clare Voss, Heng Ji
- TMLR 2023 **Efficient Reward Poisoning Attacks on Online Deep Reinforcement Learning**
Yinglun Xu, Qi Zeng, Gagandeep Singh
- ACL 2023 **C-PMI: Conditional Pointwise Mutual Information for Turn-level Dialogue Evaluation** (DialDoc Workshop)
Liliang Ren*, Mankeerat Sidhu*, Qi Zeng, Revanth Gangi Reddy, Heng Ji, Chengxiang Zhai
- ACL 2023 **Interpretable Automatic Fine-grained Inconsistency Detection in Text Summarization**
Hou Pong Chan, Qi Zeng, Heng Ji
- NAACL 2022 **RESIN-11: Schema-guided Event Prediction for 11 Newsworthy Scenarios** (Demo Track)
Xinya Du, Zixuan Zhang, Sha Li, Ziqi Wang, Pengfei Yu, Hongwei Wang, Tuan Manh Lai, Xudong Lin, Iris Liu, Ben Zhou, Haoyang Wen, Manling Li, Darryl Hannan, Jie Lei, Hyounghun Kim, Rotem Dror, Haoyu Wang, Michael Regan, Qi Zeng, Qing Lyu, Charles Yu, Carl Edwards, Xiaomeng Jin, Yizhu Jiao, Ghazaleh Kazeminejad, Zhenhailong Wang, Chris Callison-Burch, Carl Vondrick, Mohit Bansal, Dan Roth, Jiawei Han, Shih-Fu Chang, Martha Palmer, Heng Ji
- NAACL 2022 **EA²E: Improving Consistency with Event Awareness for Document-level Argument Extraction**
Qi Zeng*, Qiusi Zhan*, Heng Ji
- NAACL 2022 **SKETCHING as a Tool for Understanding and Accelerating Self-attention**
Yifan Chen*, Qi Zeng*, Dilek Hakkani-Tur, Di Jin, Heng Ji, Yun Yang
- NeurIPS 2021 **Skyformer: Remodel Self-Attention with Gaussian Kernel and Nyström Method**
Yifan Chen*, Qi Zeng*, Heng Ji, Yun Yang
- NAACL 2021 **GENE: Global Event Network Embedding** (TextGraphs-15 Workshop)
Qi Zeng, Manling Li, Tuan Lai, Heng Ji, Mohit Bansal, Hanghang Tong
- TAC 2020 **GAIA at SM-KBP 2020 - A Dockerized Multi-media Multi-lingual Knowledge Extraction, Clustering, Temporal Tracking and Hypothesis Generation System** (Demo)
Manling Li, Ying Lin, Tuan Manh Lai, Xiaoman Pan, Haoyang Wen, Lifu Huang, Zhenhailong Wang, Pengfei Yu, Di Lu, Qingyun Wang, Haoran Zhang, Qi Zeng, Chi Han, Zixuan Zhang, Yujia Qin, Xiaodan Hu, Nikolaus Parulian, Daniel Campos, Heng Ji, etc.
- INLG 2020 **ReviewRobot: Explainable Paper Review Generation based on Knowledge Synthesis**
Qingyun Wang, Qi Zeng, Lifu Huang, Kevin Knight, Heng Ji, Nazneen Fatema Rajani
- EMNLP 2020 **Connecting the Dots: Event Graph Schema Induction based on Path Language Modeling**
Manling Li, Qi Zeng, Ying Lin, Kyunghyun Cho, Heng Ji, Jonathan May, Nathanael Chambers, Clare Voss
- ACL 2020 **Cross-media Structured Common Space for Multimedia Event Extraction**
Manling Li*, Alireza Zareian*, Qi Zeng, Spencer Whitehead, Di Lu, Heng Ji, Shih-Fu Chang.
- EMNLP 2019 **Asking Clarification Questions in Knowledge-Based Question Answering**
Jingjing Xu, Yuechen Wang, Duyu Tang, Nan Duan, Pengcheng Yang, Qi Zeng, Ming Zhou, Xu Sun.
- EMNLP 2019 **LexicalAT: Lexical-Based Adversarial Reinforcement Training for Robust Sentiment Classification**

- Jingjing Xu, Liang Zhao, Hanqi Yan, Qi Zeng, Yun Liang, Xu Sun
- NAACL 2019 **Review-Driven Multi-Label Music Style Classification by Exploiting Style Correlations**
Jingjing Xu*, Guangxiang Zhao*, Qi Zeng, Xuancheng Ren, Xu Sun.
- AAAI 2019 **Text Assisted Insight Ranking Using Context-Aware Memory Network**
Qi Zeng*, Liangchen Luo*, Wenhao Huang, Yang Tang.
- AAAI 2019 **Learning Personalized End-to-End Goal-Oriented Dialog**
Liangchen Luo, Wenhao Huang, Qi Zeng, Xu Sun, Zaiqing Nie.
- EMNLP 2018 **A Skeleton-Based Model for Promoting Coherence in Narrative Story Generation**
Jingjing Xu, Xuancheng Ren, Yi Zhang, Qi Zeng, Xiaoyan Cai, Xu Sun.
- EMNLP 2018 **An Auto-Encoder Matching Model for Learning Utterance-Level Semantic Dependency in Dialogue Generation**
Jingjing Xu*, Liangchen Luo*, Junyang Lin, Qi Zeng, Xu Sun.
- ACL 2018 **Unpaired Sentiment-to-Sentiment Translation Using Cycled Reinforcement Learning**
Jingjing Xu, Xu Sun, Qi Zeng, Xuancheng Ren, Xiaodong Zhang, Houfeng Wang, Wenjie Li.

Academic Services

- Conference AAAI 2023, AAAI-KnowledgeNLP 2023, ACL 2023, ACL-Demo 2022-2023,
Reviewer ARR 2021-2023, CCL 2020&2023, EACL-Demo 2023, EMNLP 2021-2023,
KDD-DI 2021-2022, ICDAR 2023, NAACL-Demo 2022, NeurIPS 2023, NLPCC 2021-2023
- Journal ACM Transactions on Asian and Low-Resource Language Information Processing (TALLIP)
- Reviewer ACM Transactions on Knowledge Discovery from Data (TKDD)
ACM Transactions on Intelligent Systems and Technology (TIST)
IEEE Journal of Biomedical and Health Informatics (JBHI)
IEEE Transactions on Audio, Speech and Language Processing (TASL)
IEEE Transactions on Knowledge and Data Engineering (TKDE)
IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)
Elsevier Neurocomputing
Elsevier Data in Brief (DIF)

Honors and Awards

- 2022 David J. Kuck Outstanding M.S. Thesis Award, UIUC
2019 AAAI-19 Student Scholarship
2017 Guan Yixian Excellent Undergraduate Student Scholarship, Peking University

Teaching and Mentoring Experiences

- Teaching CS546 Advanced Natural Language Processing, Fall 2023, University of Illinois Urbana-Champaign
Assistant CS546 Advanced Natural Language Processing, Fall 2021, University of Illinois Urbana-Champaign
CSE337 Scripting Languages, Spring 2019, Stony Brook University
CSE101 Introduction to Computers, Fall 2018, Stony Brook University
Study and Practice on Topics of Frontier Computing(I), Fall 2017, Peking University
- Mentorship Shitong Dai, BS@RUC, 2023 Summer
Mankeerat Singh Sidhu, BS@UIUC, 2023 Spring
Qiusi Zhan, MS@UIUC, 2022 Fall

Technical Skills

- Programming Python, C++
ML Library Pytorch, Fairseq, Huggingface
Tools Latex, Git, Docker