

QINGKAI MIN

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🎓 EDUCATION

Westlake University, Zhejiang, China Nov, 2021 – Present

Ph.D. student in Computer Science and Technology Advisor: Prof. Yue Zhang

Nanjing University of Aeronautics and Astronautics, Jiangsu, China Sept, 2015 – Mar, 2018

M.S. in Computer Science and Technology

Nanjing University of Aeronautics and Astronautics, Jiangsu, China Sept, 2011 – Jun, 2015

B.S. in Internet of Things

👤 PROFESSIONAL EXPERIENCE

Westlake University Zhejiang, China Nov, 2018 – Aug, 2021

Research Assistant Advisor: Prof. Yue Zhang

Singapore University of Technology and Design Singapore May, 2018 – Aug, 2018

Research Assistant Advisor: Prof. Yue Zhang

⚙️ PROJECTS

Injecting knowledge into relation extraction Nov 2021 – Present

Retrieve knowledge related to entity mentions in a sentence from KGs and transfer knowledge triples into sentences. The sentential knowledge is used to augment the relation context in a prompt-tuning manner.

Document-level relation extraction Dec, 2020 – Present

- Build a generative model for document-level RE. Specifically, BART model is used to generate all the triples in a fixed order: <head, relation, tail>.
- Document-level text simplification is used to perform continue-pretraining on BART to help understand the long document, where the graph model GDPNet is also embedded in. Construct pretraining datasets from Wikipedia and PubMed.
- Relations interaction in a document using a multi-head attention mechanism.
- Utilize coreference resolution to enhance the long-range dependencies for logical reasoning.

Dialogue state induction in task-oriented dialogue systems Oct, 2019 – Sept, 2020

The manual labeling-train-test paradigm can be slow, costly and error-prone, and more importantly, cannot cover the vast range of domains in real-world dialogues for customer service. We propose the task of dialogue state induction, building two neural latent variable models that mine dialogue states automatically from unlabeled customer service dialogue records.

Chinese SQL semantic parsing Nov, 2018 – Oct, 2019

Build a Chinese text-to-SQL dataset called CSpider. Explore some research questions arising from the uniqueness of the language, which requires word segmentation, and also from the fact that SQL keywords and columns of DB tables are typically written in English.

📄 PUBLICATIONS

- Qingkai Min, Libo Qin, Zhiyang Teng, Xiao Liu, Yue Zhang. Dialogue State Induction Using Neural Latent Variable Models. In Proceedings of IJCAI 2020. Yokohama, July.
- Qingkai Min, Yuefeng Shi and Yue Zhang. A Pilot Study for Chinese SQL Semantic Parsing. In Proceedings of EMNLP 2019. Hong Kong, China.