

Beijing, China

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Education

Renmin University of China	Beijing, China
Ph.D. Candidate in Artificial Intelligence Advisor: Xin Zhao	09/2021 - present
University of Electronic Science and Technology of China	Chengdu, China
Bachelor in Software Engineering GPA:3.96/4.0 Rank:1/135	09/2017 - 06/2021

Projects

Knowledge Base Question Answering

02/2021 - present

Renmin University of China Advisor: Xin Zhao

- We want to design a universal KBQA model which can transfer the multi-hop reasoning ability across different knowledge bases.
- In order to comprehensively organize the existing approaches, we fist surveyed the papers for solving complex KBQA and I took charge of the information retrieval based methods. We finally completed a survey accepted in IJCAI 2021.
- I have tried using PLM and KGE to unify the input space and decouple the reasoning ability learning from representation learning, which obtained improvement comparing to many recent baselines.
- However, with ablation study, we found that the better question representation from PLM (e.g., RoBERTa) was
 the main reason for performance improvement, not the transfered reasoning ability. So, I am sill focusing on the
 problem currently.

Text Generation Library

09/2020 - 02/2021

Renmin University of China Advisor: Xin Zhao

- This is an open-source text generation library supporting 21 baseline models within four categories including VAE, GAN, Pretrained Language Models and Seq2Seq models.
- I was responsible for writing some base classes for data pre-processing and loading. Besides, I implemented three GAN based text generation models, that are LeakGAN and MaskGAN. Finally, our demo was accepted in ACL 2021.
- With this project, I understood the details of GAN network. Besides, I also knew the basic idea about how to apply GAN into text generation and optimized them with reinforcement learning (RL).

Open Domain Dialog System

01/2020 - 07/2020

Renmin University of China Advisor: Xin Zhao

- We aim to design a multi-turn dialog system which generates responses keeping semantic consistent with previous turns.
- We adopted AMR (abstract meaning representation) to efficiently encode the history conversation as a graph and then translated the response generation into a graph-to-text problem.
- o I pre-processed the dataset, reproduced many baselines and explored some graph-to-text generation strategies.

Chinese Sentiment Analysis

07/2019 - 12/2019

University of Electronic Science and Technology of China Advisor: Jinyu Zhan

 Freezing the lower 4 layers of BERT and leveraging the mean-max-pool strategy combined with L2 regularization and early stop, I obtained 1% improvement on test set compared to directly using #CLS# of BERT to represent a sentence and avoided overfitting when finetuned on a small downstream dataset.

Honors and Awards

o 2021 **Outstanding Graduates of Sichuan Province** (winning ratio 3.7%), Education Department of Sichuan.

- o 2020 China National Scholarship (top 1.5%), Ministry of Education of the People's Republic of China.
- o 2019 China National Scholarship (top 1.5%), Ministry of Education of the People's Republic of China.
- o 2019 **Meritorious Winner** (winning ratio **7.09%**) in Mathematical Contest In Modeling, the COMAP of American.
- o 2018 National Encouragement Scholarship (top 5%), Ministry of Education of the People's Republic of China.

Publications

TextBox: A Unified, Modularized, and Extensible Framework for Text Generation

• The 3^{td} author. *ACL 2021*, *System Demonstration*.

A Survey on Complex Knowledge Base Question Answering: Methods, Challenges and Solutions.

• The 2nd author. *IJCAI 2021*, *Survey Track*.