Shengkun Ma

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Education

Beijing University of Posts and Telecommunications **Sep. 2021 – Present**
M.S. in Computer Science and and Technology, School of Computer Science *Beijing, China*
Lab: State Key Laboratory of Networking and Switching Technology, supervised by Prof. Bo Cheng
Honor: *National Scholarship, Outstanding Graduate Student*

Xidian University **Sep. 2017 – Jun. 2021**
B.S. in Software Engineering, School of Computer Science and Technology *Xian, China*
Honor: *School Scholarship every year with GPA 3.7/4.0*

Publications

- **Making Pre-trained Language Models Better Continual Few-shot Relation Extractor**
  Shengkun Ma, Jiale Han, Yi Liang, Bo Cheng.
  Submitted to COLING 2024
- **A Rationale-Centric Data Augmentation Method for Cross-Document Event Coreference**
  Bowen Ding, Qingkai Min, **Shengkun Ma**, Linyi Yang, Yue Zhang.
  Under review on AAAI 2024
- **Generative Prompt Tuning for Relation Classification**
  Jiale Han, Shuai Zhao, Bo Cheng, **Shengkun Ma** and Wei Lu.
  Accepted as EMNLP 2022 Findings

Research Experience

Making PLMs Better Continual Few-shot Relation Extractor. **Jan. 2023 – Sep. 2023**
First author (Supervised by Prof. Bo Cheng) *Beijing, China*
- This work focuses on continual few-shot relation extraction with two challenges: catatrophic forgetting and overfitting, and propose a contrastive prompt learning framework and introduce a memory augmentation strategy based on GPT-series.
- We outperform SOTA methods by a large merge and significantly mitigates catastrophic forgetting and overfitting.
- I'm the main person in charge of this project and responsible for all the work.
- *Submitted to COLING 2024.*

Rationale Data Augmentation for Cross-Document Event Coreference. **May 2023 – Aug. 2023**
Group member of WestlakeNLP (Supervised by Prof. Yue Zhang) *Hangzhou, China*
- To reduce model overfitting on lexical surface matching of event triggers, we design a rationale-centric data augmentation method by generating trigger-diverse counterfactually augmented data from LLMs.
- In this project, I am responsible for evaluating the performance of LLMs for Cross-Document Event Coreference.
- *Under review on AAAI 2024.*

Generative Prompt Tuning for Relation Classification. **Sep. 2021 – Jan. 2022**
Co-author with Dr.Han (Supervised by Prof. Bo Cheng) *Beijing, China*
- To apply prompt learning to relation classification, we propose a novel generative prompt tuning method to reformulate relation classification as an infilling problem and design an entity-guided decoding for inference.
- In this project, I am mainly responsible for coding and conducting experiments.
- *Accepted as EMNLP 2022 Findings.*

Work Experience

Evaluation of Large Language Models **Apr. 2023 – Oct. 2023**
Internship in WestlakeNLP (Supervised by Dr. Linyi Yang) *Hangzhou, China*
- Participate in the evaluation of large language models and responsible for designing schemes to solve some downstream tasks with GPT-series/Claude and evaluating the performance of large language models.
- Some research work about Explainable Artificial Intelligence (XAI) and commonsense reasoning.

Mobile Phone Camera Driver Development **Mar. 2021 – May 2021**
Embedded software development engineer (Internship in Consumer BG, huawei) *Xi'an, China*
- Work in basic ROM device driver development group and mainly learn about mobile phone camera hardware and drivers, also involved in new product camera drivers research and development.

Skills Summary

Programming Languages: Python, C++
Developer Tools: Linux, Pytorch, Scikit-learn, OpenAI
Languages: Mandarin, English