# Shengkun Ma

#### 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: Second-class Scholarship with GPA 3.7/4.0

### **Publications**

• Making Pre-trained Language Models Better Continual Few-shot Relation Extractors Shengkun Ma, Jiale Han, Yi Liang and Bo Cheng.

Accepted as COLING 2024

• A Rationale-Centric Data Augmentation Method for Cross-Document Event Coreference Bowen Ding\*, Qingkai Min\*, Shengkun Ma, Linyi Yang and Yue Zhang.

\*\*Accepted as NAACL 2024\*

Generative Prompt Tuning for Relation Classification
 Jiale Han, Shuai Zhao, Bo Cheng, Shengkun Ma and Wei Lu.
 EMNLP 2022 Findings

## Research Experience

#### Making PLMs Better Continual Few-shot Relation Extractors.

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 ChatGPT.
- \* We outperform current SOTA by a large merge and significantly mitigates catastrophic forgetting and overfitting.
- \* I'm the main person in charge of this project and this is my first work.
- \* Accepted as COLING 2024.

#### A Rationale-centric Data Augmentation Method for Cross-Document ECR.

May 2023 - Aug. 2023

Group member of WestlakeNLP (Supervised by Prof. Yue Zhang and Dr. Linyi Yang)

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.
- \* I'm responsible for evaluation of LLMs for Cross-Document Event Coreference Resolution.
- \* Accepted as NAACL 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.
- \* I'm mainly responsible for coding and conducting experiments.
- \* EMNLP 2022 Findings.

# Experience

#### **Evaluation of Large Language Models**

Apr. 2023 - Oct. 2023

Intern in WestlakeNLP, Westlake University (Supervised by Prof. Yue Zhang and Dr. Linyi Yang)

Hangzhou, China

- \* Participate in the evaluation of large language models and responsible for designing schemes to solve some downstream tasks with LLMs and evaluating the performance of LLMs.
- \* Some research work about Explainable Artificial Intelligence (XAI) and commonsense reasoning.

#### Mobile Phone Camera Driver Development

Mar. 2021 - May 2021

Embedded software development engineer (Intern 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, Huggingface

Languages: Mandarin, English