Yihuai Hong

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Education

Bachelor of Engineering, Computer Science Sept 2020 – Present
South China University of Technology(**SCUT**), Guangdong, China Expected Graduation: June 2024
GPA: 3.57/4.00 (Top **10**)
Relevant Courses: Algorithm design and analysis(94), Probability & Mathematical Statistics(94), Discrete Mathematics(95), Data Structure(92), Database System(90), Java Programming(93), Advanced Language Program Design(97), Advanced Topics of Information Technology(98)

Research Experience

Research Intern, Supervisor: Dr. *Aldo Lipani* June 2023 - Present
Web Intelligence Group, UCL
- Conduct the NLP research on the Knowledge Editing of Large Language Model
- Perform the experiments and analysis toward top-tier NLP conferences

Research Intern, Supervisor: Dr. *Ziqian Zeng* July 2021 - Present
School of Computer Science and Engineering, SCUT
- Conduct the NLP research on Pretrained Language Model and Information Extraction
- Perform the experiments and analysis toward top-tier NLP conferences

Work Experience

NLP Research Intern Jan 2023 - Apr 2023
Wisers Information Limited Company
- Analysis of the Financial News Sentiment
- Identification of the Financial News subjects and analysis of their relevance.

Publications

ConsistentEE: A Consistent and Hardness-Guided Early Exiting Method for Accelerating Language Models Inference. Aug 2023

Ziqian Zeng*, **Yihuai Hong***, HongLiang Dai, Huiping Zhuang, Cen Chen

Preprint, 2023

Projects

Dynamic Early-exit based on Sample Weight Optimization. (Aiming for AAAI 2024) Dec 2022 – Aug 2023
- Dynamic Early-exit, allowing samples to exit earlier without passing through the entire model, is an effective method to speed up inference of PLM. The challenges lie in enhancing performance and effectiveness simultaneously.
- Design the method to explore the memory distribution(whether the sample has been remembered) and utilize this distribution to conduct the Early-exit, which can maintain the model performance and speed up the inference **1.5** times.

Event Extraction via Prompt Learning. (Under progress) Aug 2022 – Present
- In Trigger Word Detection, prompt learning can't work well as the traditional finetuned pre-trained model. How to incorporate the text feature about trigger words into prompt representation is the current difficulty.
- We employ the attention mechanism to achieve that and improve the performance by nearly 2% compared with the Pattern-Exploiting Training model.

Few Shot learning Relation Extraction based on Prompt Free. May 2022 – Aug 2022

- In relation extraction task, we leverage the prompt-free method utilizing the adapter layer to learn the task specific prompt feature, following the adapter-finetune idea and setting.
- Enhance the model performance by around 1-2% compared with the prompt-free model (Meta AI in ACL2022).

Patent

Self-supervised pre-training method, system and medium for Chinese Pinyin spelling correction. Sept 2022

IP No: 202211156374.3

Honors and Awards

Meritorious Winner of The Mathematical Contest in Modeling (MCM) May 2023
National Scholarship Oct 2022
Kaggle **Silver** medal (Top 5%) July 2021
- CommonLit Readability Prize： Rate the complexity of literary passages for grades 3-12 classroom use Kaggle

Kaggle Bronze medal (Top 6%) Mar 2022
- Evaluating Student Writing: Analyze argumentative writing elements from students grades 6-12

SCUT First Prize Scholarship Oct 2022
SCUT Second Prize Scholarship Oct 2021

SKILLS

Programming Languages: Python, C++, C, Matlab
Framework & Tools: PyTorch, TensorFlow, Django
Languages: English, Chinese (Native)