Jianing Wang

Ph.D Student · Artificial Intelligence

Shanghai, China

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Education

East China Normal University (ECNU) *Shanghai, China*
Ph.D in Data Science and Engineering *September 2019 - June 2024*
- Research Interests: Language Modeling, Few-shot Learning, Information Extraction, Question Answering

Jiangsu University of Science and Technology (JUST) *Soochow, China*
BEng in Software Engineering *GPA: 4.05/5.0, Top 3%* *September 2015 - June 2019*
- Curriculum: Operating System, Data Science, Machine Learning, Database, Java Web, *etc.*

Research and Work Experience

Computer Science and Engineering, University of California, San Diego *San Diego, USA*
Advisor: Dr. Julian McAuley *October 2023 - February 2024*
- Visiting Scholar: Large Language Model, Personalized Learning

ECNU - Alibaba Group, Platform of AI, Cooperation *Hangzhou, China*
Co-Advisors: Dr. Chengyu Wang and Dr. Minghui Qiu *March 2021 - February 2023*
- AIR Intern: Large Language Model, Prompt-tuning, Few-shot Learning

Ant Group, Insurance Technology Research *Shanghai, China*
Advisor: Dr. Hongbing Wang *June 2021 - August 2022*
- Research Intern: Chinese Spelling Correction, Knowledge-enhanced Language Model

School of Data Science and Engineering, East China Normal University *Shanghai, China*
Co-Advisors: Prof. Ming Gao, Prof. Xiang Li and Prof. Yunshi Lan *September 2019 - June 2024*
- Ph.D Research: Knowledge Graph, Information Extraction, Question Answering, Code Representations

Teaching Experience

2022 **Teaching Assistant**, Algorithm Foundations for Data Science and Engineering
Instructed by Prof. Ming Gao, School of Data Science and Engineering, ECNU

2022 **Teaching Assistant**, Data Middle Platform
Instructed by Prof. Cen Chen, School of Data Science and Engineering, ECNU

Honors and Awards

2023 **Artificial Intelligence World Innovations, The 6th Place**, WAIC Conference *RMB 6,000*
PromptCBLU Benchmarks, The 9th Place, PromptCBLUE

2022 **Artificial Intelligence World Innovations, The 2nd Place**, WAIC Conference *RMB 20,000*
CLUE Benchmarks Version 1.1, The 15th Place, CLUE
"Huaxin" Enterprise Scholarship, East China Normal University *RMB 15,000*

2021 **Outstanding Student**, East China Normal University
"Huaxin" Enterprise Scholarship, East China Normal University *RMB 15,000*

2020 **Second Prize**, The 17th China Post-Graduate Mathematical Contest in Modeling

Projects

2023 - 2023 **Ant Medical LLM**,
Supported by Ant Group, Ant LLM is a large language model in Ant Group. We build a medical LLM based on Ant LLM in a pipeline of continual pre-training, knowledge injection, instruction-tuning SFT, RLHF, and hallucination alleviation.

2022 - 2023 **EasyNLP Open-source Toolkit**, [GitHub] [Paper]
Supported by Alibaba Group through Alibaba Innovative Research Program, EasyNLP is an easy-to-use NLP development and application toolkit in PyTorch, first released inside Alibaba in 2021. It is built with scalable distributed training strategies and supports a comprehensive suite of NLP algorithms for various NLP applications.

2022 - 2023 **HugNLP Library**, [GitHub] [Paper]
supported by the National Natural Science Foundation of China, HugNLP is a novel development and application library based on HuggingFace for improving the convenience and effectiveness of NLP researchers. Researchers can use it to perform NLP experiments, such as text classification, question answering, instruction-tuning, etc.

Publications

PUBLISHED PAPERS & PREPRINTS

(* indicate equal contribution. **First Author: 10 papers**, **Accepted: 17 papers**, **Total: 21 papers**. Click here to see more.)

The following are 17 accepted publications:

[1] **Jianing Wang**, Chengyu Wang, Jun Huang, Ming Gao and Aoying Zhou. *Uncertainty-aware Self-training for Neural Sequence Labeling*. **AAAI 2023**, Washington D.C., US. [Paper]

[2] **Jianing Wang**, Wenkang Huang, Minghui Qiu, Qiuhui Shi, Hongbin Wang, Xiang Li and Ming Gao. *Knowledge Prompting in Pre-trained Language Model for Natural Language Understanding*. **EMNLP 2022**, Abu Dhabi, UAE. [Paper]

[3] **Jianing Wang***, Chengyu Wang*, Minghui Qiu, Qiuhui Shi, Hongbin Wang, Jun Huang and Ming Gao. *KECP: Knowledge-Enhanced Contrastive Prompting for Few-shot Extractive Question Answering*. **EMNLP 2022**, Abu Dhabi, UAE. [Paper]

[4] **Jianing Wang**, Chengyu Wang, Chuanqi Tan, Minghui Qiu, Songfang Huang, Jun Huang and Ming Gao. *SpanProto: A Two-stage Span-based Prototypical Network For Few-shot Named Entity Recognition*. **EMNLP 2022**, Abu Dhabi, UAE. [Paper]

[5] **Jianing Wang***, Chengyu Wang*, Fuli Luo, Chuanqi Tan, Minghui Qiu, Fei Yang, Qiuhui Shi, Songfang Huang and Ming Gao. *Towards Unified Prompt Tuning for Few-shot Text Classification*. **Findings of EMNLP 2022**, Abu Dhabi, UAE. [Paper]

[6] **Jianing Wang**, Nuo Chen, Qiushi Sun, Wenkang Huang, Chengyu Wang and Ming Gao. *HugNLP: A Unified and Comprehensive Library for Natural Language Processing*. **CIKM 2023 Demo**. [Paper]

[7] **Jianing Wang**, Qiushi Sun, Nuo Chen, Chengyu Wang, Ming Gao and Jun Huang. *Uncertainty-aware Parameter-Efficient Self-training for Semi-supervised Language Understanding*. **Findings of EMNLP 2023**, Singapore.

[8] Chengyu Wang*, **Jianing Wang***, Minghui Qiu, Jun Huang and Ming Gao. *TransPrompt: Towards an Automatic Transferable Prompting Framework for Few-shot Text Classification*. **EMNLP 2021**, Online. [Paper]

[9] Yuanyuan Liang, **Jianing Wang**, Hanlun Zhu, Lei Wang, Yunshi Lan, Weining Qian. *Prompting Large Language Models with Chain-of-Thought for Few-Shot Knowledge Base Question Generation*. **EMNLP 2023**, Singapore.

[10] Taolin Zhang, Junwei Dong, **Jianing Wang**, Chengyu Wang, Ang Wang, Yinghui Liu, Jun Huang, Yong Li, Xiaofeng He. *Revisiting and Advancing Chinese Natural Language Understanding with Accelerated Heterogeneous Knowledge Pre-training*. **EMNLP 2022 Industry Paper**, Abu Dhabi, UAE. [Paper]

[11] Moming Tang, Chengyu Wang, **Jianing Wang**, Chuanqi Tan, Songfang Huang, Cen Chen and Weining Qian. *XtremeCLIP: Extremely Parameter-efficient Tuning for Low-resource Vision Language Understanding*. **Findings of ACL 2023**. [Paper]

[12] Nuo Chen, Qiushi Sun, **Jianing Wang**, Xiang Li and Ming Gao. *Pass-Tuning: Towards Structure-Aware Parameter-Efficient Tuning for Code Representation Learning*. **Findings of EMNLP 2023**, Singapore.

[13] Nuo Chen, Qiushi Sun, **Jianing Wang**, Xiaoli Li, Xiang Li, Ming Gao. *Evaluating and Enhancing the Robustness of Code Pre-trained Models through Structure-Aware Adversarial Samples Generation*. **Findings of EMNLP 2023**, Singapore.

[14] Moming Tang, Chengyu Wang, **Jianing Wang**, Cen Chen, Ming Gao and Weining Qian. *ParaSum: Contrastive Paraphrasing for Low-resource Extractive Text Summarization*. **KSEM 2023**. [Paper]

[15] Chengcheng Han, Liqing Cui, Renyu Zhu, **Jianing Wang**, Nuo Chen, Qiushi Sun, Xiang Li and Ming Gao. *When Gradient Descent Meets Derivative-Free Optimization: A Match Made in Black-Box Scenario*. **Findings of ACL 2023**. [Paper]

[16] Jiyong Zhou, Chengyu Wang, Junbing Yan, **Jianing Wang**, Yukang Xie, jun huang and Ying Gao. *UKT: A Unified Knowledgeable Tuning Framework for Chinese Information Extraction*. **NLPCC 2023**, Foshan, China.

[17] Chengyu Wang, Minghui Qiu, Taolin Zhang, Tingting Liu, Lei Li, **Jianing Wang**, Ming Wang, Jun Huang, Wei Lin. *EasyNLP: A Comprehensive and Easy-to-use Toolkit for Natural Language Processing*. **EMNLP 2022 System Demonstration**, Abu Dhabi, UAE. [Paper]

The following are 4 under-review publications:

[18] **Jianing Wang**, Chengyu Wang, Chuanqi Tan, Songfang Huang, Jun Huang and Ming Gao. *Boosting In-Context Learning with Knowledge*. **Under-Review**.

[19] **Jianing Wang**, Qiushi Sun, Nuo Chen, Xiang Li and Ming Gao. *Boosting Language Models Reasoning with Chain-of-Knowledge Prompting*. **Under-Review**. [Paper]

[20] Qiushi Sun, Nuo Chen, **Jianing Wang**, Xiang Li and Ming Gao. *TransCoder: Towards Unified Transferable Code Representation Learning Inspired by Human Skills*. **Under-Review**.

[21] Qiushi Sun, Nuo Chen, **Jianing Wang**, Xiaoli Li. *Rethinking the Role of Structural Information: What Makes Code Pre-trained Models Work?*. **Under-Review**.

Others

SKILLS

Programming Skills: Python, PyTorch, Transformers, Java, SQL, LaTeX, HTML, CSS, Javascript, etc.

Technology Skills: Language Modeling, Knowledge Graph, Few-shot Learning.

Writing Skills: Writing blogs on CSDN and Zhihu.

PROFESSIONAL SERVICE

Reviewer for AAAI, EMNLP, ACL, etc.