Yanzeng Li

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Research Interests

Natural Language Processing (NLP), Applications of NLP, Knowledge Graph (KG), and KG incorporated Large Language Models, ML Sys.

EDUCATION

Peking University

Beijing, China

• Wangxuan Institute of Computer Technology

September 2021 - Present

Website: https://cv.lsvih.com

PhD candidate, in Computer Application Technology

Chinese Academy of Sciences

Beijing, China

• Institute of Information Engineering

September 2018 - June 2021

M.Eng., in Computer Science and Technology

Central South University

Hunan, China

• Powder Metallurgy Research Institute

September 2012 - June 2016

B.Eng., in Powder Materials Science and Engineering

Research Experience

Data Management Lab

WICT, PKU

Research Intern & Student, supervised by Lei Zou

June 2021 - Present

- Knowledge Graph Construction. Construct KG from unstructured corpus; Information extraction methods; KGC System.
- o Multimodal Graph Data Management. Manage multimodal graph data; Graph database optimize; Database query extension.
- Machine Learning System. Multi-model scheduling; Deep learning model accelerate; Distributed system.
- o Applications of KG. Knowledge base question and answering; LLM-based methods for KBQA; Visualization and analysis of KG.

Beijing Institute for General Artificial Intelligence (BIGAI)

Beijing, China

Research Intern. Mentored by Zilong Zhen & Wenjuan Han

November 2021 - December 2023

- o Multimodal Knowledge Graph. Construct multimodal knowledge graph, and build applications like KBQA, VQA, etc., upon the knowledge graph.
- o Graph Database OPS. Establish and maintain infrastructure (gStore graph database) for serving graph data, as a important component in business pipeline.

Knowledge Discovery for Security Group

IIE, CAS

Research Intern & Student, supervised by Tingwen Liu

May 2017 - June 2021

- Information Extraction. Extract elements from text, e.g., named entities, aspect.
- Pre-training Language Model. Design and optimize PLM architecture; Accelerate heterogeneous PLMs.
- Data Annotation. Build up data annotation tools; Active learning.

State Key Laboratory for Powder Metallurgy

PMRI. CSU

Research Intern, supervised by Huachan Fang

2015 - April 2016

- Leveraging Large Language Model as Simulated Patients for Clinical Education Yaneng Li, Cheng Zeng, Jialun Zhong, Ruoyu Zhang, Minhao Zhang, Lei Zou In Preprint
- gBuilder: A Scalable Knowledge Graph Construction System for Unstructured Corpus Yanzeng Li, Lei Zou
- LLMaAA: Making Large Language Models as Active Annotators Ruoyu Zhang, **Yanzeng Li**, Yongliang Ma, Ming Zhou, Lei Zou. In Findings of the Association for Computational Linguistics: EMNLP 2023
- CORD: A Three-Stage Coarse-to-Fine Framework for Relation Detection in Knowledge Base Question Answering

Yanzeng Li, Sen Hu, Wenjuan Han, Lei Zou.

In Proceedings of the 32nd ACM International Conference on Information and Knowledge Management (CIKM), 2023

- AtTGen: Attribute Tree Generation for Real-World Attribute Joint Extraction
 Yanzeng Li, Bingcong Xue, Ruoyu Zhang, Lei Zou.
 In Proceedings of the 61th Annual Meeting of the Association for Computational Linguistics (ACL), 2023
- A Novel Table-to-Graph Generation Approach for Document-Level Joint Entity and Relation Extraction Ruoyu Zhang, **Yanzeng Li**, Lei Zou.

 In Proceedings of the 61th Annual Meeting of the Association for Computational Linguistics (ACL), 2023
- VGStore: A Multimodal Extension to SPARQL for Querying RDF Scene Graph Yanzeng Li, Zilong Zheng, Wenjuan Han, Lei Zou In Proceedings of the 21st International Semantic Web Conference (ISWC), 2022
- Introducing Semantic Information for Numerical Attribute Prediction over Knowledge Graphs Bingcong Xue, **Yanzeng Li**, Lei Zou In Proceedings of the 21st International Semantic Web Conference (ISWC), 2022
- Enhancing Chinese Pre-trained Language Model via Heterogeneous Linguistics Graph Yanzeng Li, Jiangxia Cao, Xin Cong, Zhenyu Zhang, Bowen Yu, Hongsong Zhu, Tingwen Liu. In Proceedings of the 60th Annual Meeting of the Association for Computational Linguistics (ACL), 2022
- Relation Extraction based on Data Partition and Representation Integration [Best Paper Runner up] Jiapeng Zhao, Panpan Zhang, Tingwen Liu, Zhenyu Zhang, Yanzeng Li, Jinqiao Shi In Proceddings of 2021 IEEE Sixth International Conference on Data Science in Cyberspace (DSC), 2021
- Semi-Open Attribute Extraction from Chinese Functional Description Text
 Li Zhang, Yanzeng Li*, Ruoyu Zhang, Wenjie Li.
 In Proceedings of the 13th Asian Conference on Machine Learning (ACML), 2021.
- FITAnnotator: A Flexible and Intelligent Text Annotation System
 Yanzeng Li, Bowen Yu, Li Quangang, Tingwen Liu.
 In Proceedings of the 2021 Conference of the North American Chapter of the Association for Computational Linguistics Human Language Technologies (NAACL-HLT) (Demonstrations), 2021
- Enhancing Pre-trained Chinese Character Representation with Word-aligned Attention
 Yanzeng Li, Bowen Yu, Mengge Xue, Tingwen Liu.
 In Proceedings of the 58th Annual Meeting of the Association for Computational Linguistics (ACL), 2020
- Character-based BiLSTM-CRF Incorporating POS and Dictionaries for Chinese Opinion Target Extraction Yanzeng Li, Tingwen Liu, Diying Li, Quangang Li, Jinqiao Shi, Yanqiu Wang. PMLR 95:518-533, In Proceedings of the 10th Asian Conference on Machine Learning (ACML), 2018.

Professional Service

- Journal Reviewer, IEEE Transactions on Knowledge and Data Engineering (TKDE)
- Journal Reviewer, IEEE Open Journal of Signal Processing (OJSP)
- Program Committee Member, the AAAI Conference on Artificial Intelligence (AAAI), 2021/2022/2023/2024
- Program Committee Member, the Conference on Empirical Methods in Natural Language Processing (EMNLP), 2021/2022/2023, & EMNLP Industry Track 2023
- Program Committee Member, the 17th Conference of the European Chapter of the Association for Computational Linguistics (EACL), 2023
- Program Committee Member, the Annual Meeting of the Association for Computational Linguistics (ACL), 2020/2021/2022
- Program Committee Member, the Conference of the North American Chapter of the Association for Computational Linguistics - Human Language Technologies (NAACL-HLT), 2021/2022/2024
- Program Committee Member, the ACM International Conference on Multimedia (ACM MM), 2024
- Program Committee Member, the IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), 2023/2024
- Program Committee Member, the 1st Conference on Language Modeling (COLM), 2024
- Program Committee Member, The ACM International Conference on Information and Knowledge Management (CIKM), 2023/2024 & Demo Track 2023
- Review Assistant/Sub Reviewer for IJCAI 2018/2021, etc.

Awards

• The 3rd Prize of PKU Scholarship	
Peking University	2023
• Merit Student	
Peking University	2022, 2023
• Merit Student	
Wangxuan Institute of Computer Technology, Peking University	2022, 2023
• Ubiquant Scholarship	
Peking University	2022
• IIE Presidential Special Scholarship (Top 1%)	
Institute of Information Engineering, Chinese Academy of Sciences	2020
• Laboratory Excellent Student Scholarship.	
Institute of Information Engineering, Chinese Academy of Sciences	2020
• Merit Student	
University of Chinese Academy of Sciences	2019, 2020
• Outstanding Student League Cadres	
Central South University	2015
(Previous) Industry Experience	
(Boloni Corp) Jufenqi E-Business Co.,Ltd	Beijing

Web Developer, mostly developed the front-end

August 2016 - May 2017

• Developed B2B&B2C products, ARP&CRM and FMIS, etc.

(Boloni Corp) KuaiKuaiZhuang Technology Co., Ltd

Beijing June 2016 - September 2016

Web Developer & App Developer

o Technology architecture design. Developed official website, iOS app, etc.

ShanHe Design Inc. [SHD 834776]

Beijing

Full Stack Developer

March 2016 - June 2016

• Developed official website, online store, recommended system, etc.