

Wenhao Zhu (朱文昊)

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Education

- **Nanjing University, China** Sept 2019 – Mar 2025
Ph.D. at the Department of Computer Science and Technology
advisor: Dr. Shujian Huang & Dr. Jiajun Chen
research interest: Multilingual Large Language Model & Machine Translation
- **Nanjing University, China** Sept 2015 - June 2019
B.E. at the School of Management and Engineering

Experience

- **The University of Edinburgh, Scotland** Oct 2023 – Oct 2024
visiting PhD Student (advisor: Dr. Alexandra Birch)
- **Shanghai Artificial Intelligence Laboratory, China** Sept 2022 – Mar 2025
research intern (mentor: Dr. Fei Yuan, Dr. Jingjing Xu and Dr. Lingpeng Kong)
- **Sogou Inc., China** May 2020 - Aug 2020
research intern (mentor: Dr. Xu Zhang)
- **University of Göttingen, Germany** July 2017 - Aug 2017
exchange student (German tutor: Dr. Soheyla Pashang)

Selected Publications

- [Question Translation Training for Better Multilingual Reasoning.](#)
Wenhao Zhu, Shujian Huang, Fei Yuan, Shuaijie She, Jiajun Chen, Alexandra Birch
In Proceedings of the 62th Annual Meeting of the Association for Computational Linguistics (**ACL**) - findings, 2024.
- [Multilingual Contrastive Decoding via Language-agnostic Layers Skipping.](#)
Wenhao Zhu, Sizhe Liu, Shujian Huang, Shuaijie She, Chris Wendler, Jiajun Chen
In Proceedings of the 2024 Conference on Empirical Methods in Natural Language Processing (**EMNLP**) - findings, 2024
- [LLaMAX: Scaling Linguistic Horizons of LLM by Enhancing Translation Capabilities Beyond 100 Languages](#)
Yinquan Lu, **Wenhao Zhu**, Lei Li, Yu Qiao, Fei Yuan
In Proceedings of the 2024 Conference on Empirical Methods in Natural Language Processing (**EMNLP**) - findings, 2024
- [Multilingual Machine Translation with Large Language Models: Empirical Results and Analysis.](#)
Wenhao Zhu, Hongyi Liu, Qingxiu Dong, Jingjing Xu, Shujian Huang, Lingpeng Kong, Jiajun Chen, Lei Li
In Proceedings of the 2024 Conference of the North American Chapter of the Association for Computational Linguistics (**NAACL**) - Findings, 2024
- [INK: Injecting kNN Knowledge in Nearest Neighbor Machine Translation.](#)
Wenhao Zhu, Jingjing Xu, Shujian Huang, Lingpeng Kong and Jiajun Chen
In Proceedings of the 61th Annual Meeting of the Association for Computational Linguistics (**ACL**), 2023
- [What Knowledge Is Needed? Towards Explainable Memory for kNN-MT Domain Adaptation.](#)
Wenhao Zhu, Shujian Huang, Yunzhe Lv, Xin Zheng, Jiajun Chen
In Proceedings of the 61th Annual Meeting of the Association for Computational Linguistics (**ACL**) - findings, 2023.

Full Paper List

- [Multilingual Contrastive Decoding via Language-agnostic Layers Skipping.](#)

Wenhao Zhu, Sizhe Liu, Shujian Huang, Shuaijie She, Chris Wendler, Jiajun Chen

In Proceedings of the 2024 Conference on Empirical Methods in Natural Language Processing (**EMNLP**) - findings, 2024

- [LLaMAX: Scaling Linguistic Horizons of LLM by Enhancing Translation Capabilities Beyond 100 Languages](#)

Yinquan Lu, **Wenhao Zhu**, Lei Li, Yu Qiao, Fei Yuan

In Proceedings of the 2024 Conference on Empirical Methods in Natural Language Processing (**EMNLP**) - findings, 2024

- [Large Language Models are Good Spontaneous Multilingual Learners: Is the Multilingual Annotated Data Necessary?](#)

Shimao Zhang, Changjiang Gao, **Wenhao Zhu**, Jiajun Chen, Xin Huang, Xue Han, Junlan Feng, Chao Deng, Shujian Huang

In Proceedings of the 2024 Conference on Empirical Methods in Natural Language Processing (**EMNLP**), 2024

- [MindMerger: Efficient Boosting LLM Reasoning in non-English Languages.](#)

Zixian Huang, **Wenhao Zhu**, Gong Cheng, Lei Li, Fei Yuan

In the Thirty-eighth Conference on Neural Information Processing Systems (**NeurIPS**), 2024

- [The Power of Translation Training in Multilingual Reasoning: Broadened Scope and Deepened Insights.](#)

Wenhao Zhu, Shujian Huang, Fei Yuan, Cheng Chen, Jiajun Chen, Alexandra Birch

arXiv 2405.01345 (submitted to **TASLP**)

- [Question Translation Training for Better Multilingual Reasoning.](#)

Wenhao Zhu, Shujian Huang, Fei Yuan, Shuaijie She, Jiajun Chen, Alexandra Birch.

In Proceedings of the 62th Annual Meeting of the Association for Computational Linguistics (**ACL**) - findings, 2024.

- [MAPO: Advancing Multilingual Reasoning through Multilingual Alignment-as-Preference Optimization.](#)

Shuaijie She, Wei Zou, Shujian Huang, **Wenhao Zhu**, Xiang Liu, Xiang Geng, Jiajun Chen

In Proceedings of the 62th Annual Meeting of the Association for Computational Linguistics (**ACL**), 2024

- [Extrapolating Large Language Models to Non-English by Aligning Languages.](#)

Wenhao Zhu, Yunzhe Lv, Qingxiu Dong, Fei Yuan, Jingjing Xu, Shujian Huang, Lingpeng Kong, Jiajun Chen, Lei Li

arXiv 2308.04948

- [Multilingual Machine Translation with Large Language Models: Empirical Results and Analysis.](#)

Wenhao Zhu, Hongyi Liu, Qingxiu Dong, Jingjing Xu, Shujian Huang, Lingpeng Kong, Jiajun Chen, Lei Li

In Proceedings of the 2024 Conference of the North American Chapter of the Association for Computational Linguistics (**NAACL**) - Findings, 2024

- [kNN-BOX: A Unified Framework for Nearest Neighbor Generation.](#)

Wenhao Zhu, Qianfeng Zhao, Yunzhe Lv, Shujian Huang, Siheng Zhao, Sizhe Liu, Jiajun Chen

In the 18th Conference of the European Chapter of the Association for Computational Linguistics (**EACL**) - demo track, 2024

- [Beyond Generic: Enhancing Image Captioning with Real-World Knowledge using Vision-Language Pre-Training Model.](#)

Kanzhi Cheng, Wenpo Song, Zheng Ma, **Wenhao Zhu**, Zixuan Zhu, Jianbing Zhang

- In Proceedings of the 31th ACM International Conference on Multimedia (**ACM-MM**), 2023
- [INK: Injecting kNN Knowledge in Nearest Neighbor Machine Translation](#).
Wenhao Zhu, Jingjing Xu, Shujian Huang, Lingpeng Kong and Jiajun Chen
 - In Proceedings of the 61th Annual Meeting of the Association for Computational Linguistics (**ACL**), 2023
 - [Lego-MT: Towards Detachable Models in Massively Multilingual Machine Translation](#).
Fei Yuan, Yinquan Lu, **Wenhao Zhu**, Lingpeng Kong, Lei Li, Jingjing Xu
 - In Proceedings of the 61th Annual Meeting of the Association for Computational Linguistics (**ACL**) - findings, 2023.
 - [What Knowledge Is Needed? Towards Explainable Memory for kNN-MT Domain Adaptation](#).
Wenhao Zhu, Shujian Huang, Yunzhe Lv, Xin Zheng, Jiajun Chen
 - In Proceedings of the 61th Annual Meeting of the Association for Computational Linguistics (**ACL**) - findings, 2023.
 - [FGraDA: A Dataset and Benchmark for Fine-Grained Domain Adaptation in Machine Translation](#).
Wenhao Zhu, Shujian Huang, Tong Pu, Pingxuan Huang, Xu Zhang, Jian Yu, Wei Chen, Yanfeng Wang, Jiajun Chen
 - In Proceedings of the 13th Conference on Language Resources and Evaluation (**LREC**), 2022.
 - [Improving Bilingual Lexicon Induction on Distant Language Pairs](#).
Wenhao Zhu, Zhihao Zhou, Shujian Huang, Zhenya Lin, Xiangsheng Zhou, Yaofeng Tu, Jiajun Chen
 - In Proceedings of the 15th China Conference on Machine Translation (**CCMT**), 2019. **Best Paper Award**.

Service

- **Program Committee / Conference Reviewer / Journal Reviewer**

ACL Rolling Review (ARR), 2023-2024

IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI), 2024

Annual Meeting of the Association for Computational Linguistics (ACL), 2023-2024

Conference on Empirical Methods in Natural Language Processing (EMNLP), 2023-2024

Annual Conference of the North American Chapter of the Association for Computational Linguistics (NAACL), 2024

China National Conference on Computational Linguistics (CCL), 2022-2024

- **Teaching Assistant / Teaching Support**

Natural Language Understanding, Generation, and Machine Translation, UoE, Spring 2024

Machine Translation and Natural Language Generation, NJU, Spring 2023

Programming for Artificial Intelligence, NJU, Spring 2021

Advanced Programming, NJU, Autumn 2020

- **Conference Volunteer**

International Joint Conferences on Artificial Intelligence (IJCAI), 2020

Skills

Programming Language: Python, C/C++

Language: Chinese (native), English (IELTS-7.5), German (A2)