Weixuan **Wang**

PH.D. STUDENT · UNIVERSITY OF EDINBURGH

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" Seeking Research Scientist Positions in Multilingual Large Language Models. "

Capability

- 8+ years of solid experience in the research and development in Multilingual NLP and Generative AI.

- Strong publication record in top-tier conferences, such as ACL, ICLR, EMNLP, and NAACL, won **ACL2025 Outstanding Paper Award**.

- Hands-on experience in developing end-to-end multilingual NLP commercial systems, which has been successfully deployed in AI service

Education

University of Edinburgh

PH.D. INSTITUTE FOR LANGUAGE, COGNITION AND COMPUTATION (ILCC)   *Sep. 2023 – Now*

- Supervised by Prof. Alexandra Birch and Dr. Barry Haddow.

Dalian University of Technology

M.ENG. NEURAL LANGUAGE PROCESSING   *Sep. 2017 – Jun. 2020*

Dalian University of Technology

B.SC. ENGINEERING IN SOFTWARE ENGINEERING   *Sep. 2013 – Jun. 2017*

Work Experience

Microsoft Research Cambridge

RESEARCH INTERN   *Jun. 2025 – Sep. 2025*

- Worked on the design and implementation of the memory management module in the multi-agent system.

IT Innovation and Research Center (IIRC), Huawei Technologies Co., LTD

AI RESEARCHER   *Apr. 2023 – Sep. 2023*

- Worked on simultaneous speech translation, and large commercial machine translation platform, and multilingual LLM.

AI Application Research Center (AARC), Huawei Technologies Co., LTD

AI RESEARCHER   *Jun. 2020 – Apr. 2023*

- Worked on Knowledge-enhanced NMT, domain-specific NMT, and Machine Translation Data Processing Pipeline.

Selected Publications

➢ **Wang, W.**, Wu, M., Haddow, B., & Birch, A. (2025). Bridging the Language Gaps in Large Language Models with Inference-Time Cross-Lingual Intervention. *In Proceedings of 63rd Annual Meeting of the Association for Computational Linguistics, (ACL 2025, Outstanding Paper Award).*

➢ **Wang, W.**, Wu, M., Haddow, B., & Birch, A. (2025). Learning to Summarize by Learning to Quiz: Adversarial Agentic Collaboration for Long Document Summarization. *arXiv:2509.20900.*

➢ **Wang, W.**, Han, D., Diaz, D. M., Xu, J., Rühle, V., & Rajmohan, S. (2025). OdysseyBench: Evaluating LLM Agents on Long-Horizon Complex Office Application Workflows. *arXiv:2508.09124.*

➢ **Wang, W.**, Wu, M., Haddow, B., & Birch, A. (2025). ExpertSteer: Intervening in LLMs through Expert Knowledge. *arXiv:2505.12313.*

➢ **Wang, W.**, Wu, M., Haddow, B., & Birch, A. (2025). HBO: Hierarchical Balancing Optimization for Fine-Tuning Large Language Models. *arXiv:2505.12300.*

➢ **Wang, W.**, Wu, M., Haddow, B., & Birch, A. (2025). Demystifying multilingual chain-of-thought in process reward modeling. *In Proceedings of the 2025 Conference on Empirical Methods in Natural Language Processing, (EMNLP 2025, Findings).*

➢ **Wang, W.**, Yang, J., & Peng, W. (2025). Semantics-Adaptive Activation Intervention for LLMs via Dynamic Steering Vectors. *The Thirteenth International Conference on Learning Representations, (ICLR 2025).*

➢ **Wang, W**, Haddow, B., Wu, M., Peng, W., & Birch, A (2024). Sharing Matters: Analysing Neurons Across Languages and Tasks in LLMs. *arXiv:2406.09265.*

➢ **Wang, W.**, Haddow, B., & Birch, A. (2024). Retrieval-augmented Multilingual Knowledge Editing. *In Proceedings of 62nd Annual Meeting of the Association for Computational Linguistics, (ACL 2024).*

➢ **Wang, W.**, Haddow, B., Birch, A., & Peng, W. (2023). Assessing the reliability of large language model knowledge. *In Proceedings of the 2024 Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies, (NAACL 2024, oral).*

➢ **Wang, W.**, Lee, C. M., Liu, J., Colakoglu, T., & Peng, W. (2023). An empirical study of cyclical learning rate on neural machine translation. *Natural Language Engineering, 29(2), 316-336.*

➢ **Wang, W.**, Meng, X., Yan, S., Tian, Y., & Peng, W. (2022). Huawei BabelTar NMT at WMT22 Biomedical Translation Task: How we further improve domain-specific NMT. *In Proceedings of the Seventh Conference on Machine Translation (WMT 2022).*

➢ **Wang, W.**, Peng, W., Huang, C. H., & Wang, H. (2022). Positively transitioned sentiment dialogue corpus for developing emotion-affective open-domain chatbots. *arXiv:2208.04565.*

➢ **Wang, W.**, Peng, W., Zhang, M., & Liu, Q. (2021). Neural Machine Translation with Heterogeneous Topic Knowledge Embeddings. *In Proceedings of the 2021 Conference on Empirical Methods in Natural Language Processing (EMNLP 2021).*

➢ **Wang, W.**, Peng, W., Meng, X., & Liu, Q. (2021). Huawei AARC's submissions to the WMT21 Biomedical Translation Task: Domain Adaption from a Practical Perspective. *In Proceedings of the Sixth Conference on Machine Translation (WMT 2021).*

➢ **Wang, W.**, Cai, X., Huang, C. H., Wang, H., Lu, H., Liu, X., & Peng, W. (2021). Emily: Developing An Emotion-affective Open-Domain Chatbot with Knowledge Graph-based Persona. *arXiv:2109.08875.*

Projects

Large Commercial Neural Machine Translation

HUAWEI TECHNOLOGIES CO., LTD   *Jan. 2023 – Sep. 2023*

- Responsibility: Developing commercial NMT with LLM, designing the multilingual training data proportion.
- Achievements: Performance based on PanGu LLM on par with existing end-to-end NMT model in 10+ languages.

End-to-end Simultaneous Speech Translation

HUAWEI TECHNOLOGIES CO., LTD   *Jul. 2022 - May 2023*

- Responsibility: Designing and evaluating the first end-to-end simultaneous translation system for Huawei meeting.
- Achievements: The end-to-end simultaneous translation system has lower latency and higher performance than the cascaded translation system.

Cascade Simultaneous Speech Translation

HUAWEI TECHNOLOGIES CO., LTD   *Jun. 2021 – Jul.2022*

- Responsibility: Designing and developing cascade simultaneous translation system for Huawei meeting.
- Achievements: SST end-to-end BLEU scores (EN<-> ZH) on par with existing commercial systems; The service successfully supported 110 + online conference sessions and 30 + onsite SST translation service for 2021/2022 Huawei STW event.

Knowledge-enhanced NMT

HUAWEI TECHNOLOGIES CO., LTD   *Sep. 2020 – May 2021*

- Responsibility: Designing, implementing, and evaluating knowledge-enhance NMT algorithms based on topic modeling and homographic representation learning (HDR).
- Achievements: BLEU enhancement on the vanilla transformer Topic-enhanced model (+1.57 EN->DE), HDR (+2.3 in EN->RU) with algorithm deployed in related Huawei machine translation service; 2 peer-reviewed conference papers.

Domain-specific NMT

HUAWEI TECHNOLOGIES CO., LTD   *Jun. 2020 – Feb. 2021*

- Responsibility: Developing ICT domain-specific machine translation model leveraging domain dictionaries.
- Achievements: BLEU increase +0.7 on SOTA EN->ZH working model.

Machine Translation Data Processing Pipeline

HUAWEI TECHNOLOGIES CO., LTD   *Jul. 2019 – Jul. 2020*

- Responsibility: Lead developing corpus processing pipeline consisting of corpus cleaning, tokenize, data enhancement, and other functions like visualization.
- Achievements: Huawei machine translation data processing pipeline V1.0.