

# HUANXUAN LIAO (廖桓萱)

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## 🎓 EDUCATION

<b>Institute of Automation, Chinese Academy of Sciences (CASIA), Beijing</b> PhD in Computer Science. In NLPR, Supervisor: <a href="#">Shizhu He</a> and <a href="#">Kang Liu</a>	2023 – Now
<b>North China Electric Power University (NCEPU), Beijing</b> <i>Bachelor of Engineering</i> in Intelligence Science and Technology (Innovation Class). Ranking 1/13	2019 – 2023

## 💡 RESEARCH INTERESTS

- Efficiency Optimization for Long Sequence Reasoning:
  - Survey: [Awesome-LLM-Long-Context-Modeling](#) (GitHub Stars > 1.8K)
  - KV Compression: [Spark](#) (AAAI 2026)
  - Episodic Memory Internalization: [SKIntern](#) (COLING 2025)
  - Context Compression: [HyCo2](#) (ArXiv 2025)
  - RAG Dynamic Parameterization: [DyPRAG](#) (ArXiv 2025)
  - Efficient Attention
- Capability Optimization for Efficient Reasoning:
  - Instruction (Latent) Learning: [TAGI](#) (NeurIPS 2024)
  - Parameter Knowledge Activation: [AAG](#) (COLING 2025)
  - Episodic Memory Collaboration: [NesyCD](#) (AAAI 2025)
  - Knowledge Transfer (CL): [DATA](#) (ArXiv 2025)
  - Tool Utilizing: [CITI](#) (AAAI 2025)
  - Personalized Tool Benchmark: [ETAPP](#) (ACL 2025)
- Efficient Multimodal Models and Reasoning

## 📄 PUBLICATIONS (SELECTED) [FULL LIST]

(\* stands for equal contribution; Listed in reverse chronological order.)

- [Huanxuan Liao](#), Yixing Xu, Shizhu He, Guachen Li, Xuanwu Yin, Dong Li, Emad Barsoum, Jun Zhao, Kang Liu. SparK: Query-Aware Unstructured Sparsity with Recoverable KV Cache Channel Pruning. (AAAI 2026, CCF-A)
- [Huanxuan Liao](#), Shizhu He, Yao Xu, Yuanzhe Zhang, Kang Liu, Jun Zhao. Neural-Symbolic Collaborative Distillation: Advancing Small Language Models for Complex Reasoning Tasks. (AAAI 2025, CCF-A)
- [Huanxuan Liao](#), Shizhu He, Yupu Hao, Xiang Li, Yuanzhe Zhang, Jun Zhao, Kang Liu. SKIntern: Internalizing Symbolic Knowledge for Distilling Better COT Capabilities into Small Language Models. (COLING 2025, CCF-B)
- [Huanxuan Liao](#), Shizhu He, Yao Xu, Yuanzhe Zhang, Kang Liu, Shengping Liu, Jun Zhao. Awakening Augmented Generation: Learning to Awaken Internal Knowledge of Large Language Models for Question Answering. (COLING 2025, CCF-B)
- [Huanxuan Liao](#), Shizhu He, Yao Xu, Yuanzhe Zhang, Yanchao Hao, Shengping Liu, Kang Liu, Jun Zhao. From Instance Training to Instruction Learning: Task Adapters Generation from Instructions. (NeurIPS 2024, CCF-A)
- [Huanxuan Liao](#), Shizhu He, Yupu Hao, Jun Zhao, Kang Liu. Beyond Hard and Soft: Hybrid Context Compression for Balancing Local and Global Information Retention. (Preprint, 2025)
- [Huanxuan Liao](#), Shizhu He, Yupu Hao, Jun Zhao, Kang Liu. DATA: Decomposed Attention-based Task Adaptation for Rehearsal-Free Continual Learning. (Preprint, 2025)
- Jiaheng Liu, Dawei Zhu, Zhiqi Bai, Yancheng He, [Huanxuan Liao](#), Haoran Que, Zekun Wang, Chenchen Zhang, Ge Zhang, Jiebin Zhang, Yuanxing Zhang, Zhuo Chen, Hangyu Guo, Shilong Li, Ziqiang Liu, Yong Shan, Yifan Song, Jiayi Tian, Wenhao Wu, Zhejian Zhou, Ruijie Zhu, Junlan Feng, Yang Gao, Shizhu He, Zhoujun Li, Tianyu Liu, Fanyu Meng, Wenbo Su, Yingshui Tan, Zili Wang, Jian Yang, Wei Ye, Bo Zheng, Wangchunshu Zhou, Wenhao Huang, Sujian Li, Zhaoxiang Zhang. A Comprehensive Survey on Long Context Language Modeling. (Preprint, 2025, Core Contributor)

## INTERNSHIP/PROJECT EXPERIENCE

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### ByteDance Beijing

Jun. 2025 – Now

*Intern* Research Intern (Efficient VLM)

### Ant Group Beijing

Feb. 2025 – May 2025

*Intern* Research Intern (Long Context)

Context Compression Based on Global and Local Strategy

- Implemented dynamic routing soft token global compression based on Qformer and MLP, and local compression based on the classification layer

Survey of Long Context Modeling

- Completed the writing of the survey based on my own long context modeling repository

KV Compression

- Perform dynamic unstructured channel pruning while restoring the pruned channels during attention computation

## AWARDS AND SCHOLARSHIPS

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### Scholarships & Awards

China National Scholarship ( <i>top scholarship in China; 0.2% domestically</i> ), Ministry of Education	Dec. 2025
Climbing Second Prize Scholarship	Dec. 2024
Beijing Outstanding Graduate Awards, Beijing Ministry of Education	Jun. 2023
China National Scholarship ( <i>top scholarship in China; 0.2% domestically</i> ), Ministry of Education	Dec. 2022
China National Scholarship ( <i>top scholarship in China; 0.2% domestically</i> ), Ministry of Education	Dec. 2021
SiFang Society Scholarship, NCEPU	Dec. 2020

### Competition

National Third Prize, Information Security Competition	Aug. 2022
National Excellence, College Student Innovation and Entrepreneurship Project	Dec. 2021
Beijing Third Prize, Internet +	Aug. 2021

## PROFESSIONAL SERVICES

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**Conference Reviewing:** ACL ARR 2024, 2025. NeurIPS 2025. ICLR 2025. AAAI 2026.

**Community:** [Awesome-LLM-Long-Context-Modeling](#) 1.9k+ Stars.