

Meng Minwei Building,
Tsinghua University, Beijing,
China, 100084
liuzhu22@mails.tsinghua.edu.cn

ZHU LIU

github.com/RyanLiut
juniperliuzhu.netlify.app

EDUCATION

- | | | |
|---|------------------------|-------------------------------|
| Tsinghua University | Beijing, China | Aug 2022 – Present |
| <ul style="list-style-type: none">• PhD in Computational Linguistics (at School of Humanities), supervised by Ying Liu and cosupervised by Maosong Sun• Research Topics: Word Sense Disambiguation, Uncertainty in Lexical Semantics, explainable LLMs• GPA: 3.93/4.0, 2023 first-level scholarship | | |
| Southern University of Science and Technology | Shenzhen, China | Aug 2019 – June 2022 |
| <ul style="list-style-type: none">• Master in Computer Science and Technology, supervised by Feng Zheng• Research Topics: Video Captioning, Conditional Textual Generation, Variational-based generative models• Thesis: Towards Human-like Diverse Video Captioning via a Latent Generative Model• GPA: 3.67/4.0 | | |
| Dalian University of Technology | Dalian, China | Sept. 2015 – June 2019 |
| <ul style="list-style-type: none">• Bachelor in Digital Media Technology (Software Engineering) | | |

PUBLICATIONS

- **Zhu Liu**, Cunliang Kong, Ying Liu, and Maosong Sun. A Top-down Graph-based Tool for Modeling Classical Semantic Maps: A Crosslinguistic Case Study of Supplementary Adverbs[J]. arxiv:2412.01423, 2024. **Under Review**.
- **Liu Z.** How well do distributed representations convey contextual lexical semantics: a Thesis Proposal[J]. arXiv preprint arXiv:2406.00751, 2024. **Under Review**.
- **Zhu Liu**, Zhen Hu, Ying Liu CoMeDi Shared Task: Models as Annotators in Lexical Semantics Disagreements[J]. arXiv preprint arXiv:2411.12147, 2024. **Under Review**.
- **Zhu Liu**, Cunliang Kong, Ying Liu, and Maosong Sun. Fantastic Semantics and Where to Find Them: Investigating Which Layers of Generative LLMs Reflect Lexical Semantics. In Findings of **ACL 2024**, pages 14551–14558, Bangkok, Thailand.
- **Zhu Liu** and Ying Liu. Ambiguity Meets Uncertainty: Investigating Uncertainty Estimation for Word Sense Disambiguation. In Findings of **ACL 2023**, pages 3963–3977, Toronto, Canada.
- **Liu, Z.**, Wang, T., Zhang, J., Zheng, F., Jiang, W., Lu, K. (2022). Show, Tell and Rephrase: Diverse Video Captioning via Two-Stage Progressive Training. *IEEE Transactions on Multimedia*.

PROGRAMS AND EVENTS

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|---|---------------------------------|---------------------------------|
| Fourth/Fifth/Sixth Linguistics PhD Forum | Tsinghua, Beijing, China | November. 2022/2023/2024 |
| <ul style="list-style-type: none">• Content 2022: Uncertainty Estimation on Word Sense Disambiguation; Award: Rank 3/20• Content 2023: Evaluation agentiveness of Subject-object reversible sentences in LLMs; Award: Rank 1/20+• Content 2024: A Top-down Graph-based Tool for Modeling Classical Semantic Maps; Award: Rank 1/20+ | | |
| CVPR 2021 Challenge | Online, Global | May. 2021 |
| <ul style="list-style-type: none">• Content: ActivityNet Dense Event Video Captioning Challenge; Award: Rank 2/60 | | |

TECHNICAL EXPERIENCE

Academic Projects

- **Interactive and automatic mural captioning:** An application to provide local and comprehensive descriptions of a mural, while using generative AI to interact with the audience. (Outstanding Creative Paper Award in CDH 2023)

Academic Service

- Conference Reviewer: EMNLP 2023, Rep4NLP 2024 (ACL'24), CoMeDi with COLING 2025
- Co-chair of SRW in ACL 2025

Teaching Activities

- **Teaching Assistant:** The 2023 undergraduate course: Python and Digital Humanities in Tsinghua University.
The 2020 undergraduate course: C and C++ programming design in SUSTech.

SKILLS

- Natural Languages: Mandarin Chinese (Native), English (IELTS: 7.5, October 2021), Spanish (basic), Japanese (basic).
- Programming Languages or Packages: Python, Matlab, R, C++, Pytorch.