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Zhu Liu

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EDUCATION

Tsinghua University   **Beijing, China**   **Aug 2022 – May 2026 (Expected)**
- PhD in Computational Linguistics
- **Research Topics:** Word Sense Disambiguation, Uncertainty in Lexical Semantics, Polysemy and lexical Ambiguity
- **Courses:** Probability and Random Mathematics (by Jun Ye, auditing), Natural Language Processing (by Yue Zhang, online auditing), Topics in Chinese Morphology and Syntax (A), Research on Corpus Linguistics (A), Research of Seclected Topics on Chinese Semantics (A)

Southern University of Science and Technology   **Shenzhen, China**   **Aug 2019 – June 2022**
- Master in Computer Science and Technology
- **Research Topics:** Video Captioning, Conditional Textual Generation, Variational-based generative models
- **Thesis:** Towards Human-like Diverse Video Captioning via a Latent Generative Model
- **Courses:** Advanced Algorithm (A), Bayesian Data Analysis (A), Machine Learning (A)
- **GPA:** 3.67/4.0

Dalian University of Technology   **Dalian, China**   **Sept. 2015 – June 2019**
- Bachelor in Digital Media Technology (Software Engineering)

PUBLICATIONS

- **Zhu Liu** and Ying Liu. 2023. Ambiguity Meets Uncertainty: Investigating Uncertainty Estimation for Word Sense Disambiguation. In Findings of the Association for Computational Linguistics: *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*.
- Wang, Teng, **Zhu Liu**, Feng Zheng, Zhichao Lu, Ran Cheng, and Ping Luo. "Semantic-Aware Pretraining for Dense Video Captioning." arXiv preprint arXiv:2204.07449 (2022).
- Ma Jian, **Liu Zhu**, Shi Yurong, et al. Multimodal Solar Flare Prediction Model Based on Sunspot Group Data [J]. Spacecraft Environmental Engineering, 2021,38(3):256-262.

SUMMER/WINTER PROGRAMS AND EVENTS

CVPR 2021 Challenge   **Online, Global**   **May. 2021**
- **Content:** Activitynet Dense Event Video Captioning Challenge
- **Award:** Rank 2

Alibaba Tianchi Challenge   **Online, China**   **Sept. 2020**
- **Content:** Track 2: Solar Storm Smart Warning
- **Award:** Rank 1/70

IAPR/IEEE Winter School   **Shenzhen, China**   **Jan. 2020**
- **Topics:** Machine Learning, Biometrics

TECHNICAL EXPERIENCE

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.

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.

Academic Service
- Conference Reviewer: EMNLP 2023

SKILLS

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