

Ziwei Xu, Ph.D.

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Education

University of Science and Technology of China

Sep 2013 – Jul 2017

Bachelor of Engineering (Honors)

- Thesis: An Indoor Localization System based on High-level Visual Feature

National University of Singapore

Aug 2017 – Jul 2023

Ph.D. Candidate in Computer Science

- Thesis: Solving Computer Vision Problems under the Compositionality Principle
- Advisor: Professor Mohan S Kankanhalli

Research Interests

- (1) Integration of symbolic and formal methods with machine learning models.
- (2) How powerful machine learning models could affect our society and the way we live and think.

Selected Publications

Ziwei Xu, Sanjay Jain, and Mohan S Kankanhalli, *Hallucination is Inevitable: An Innate Limitation of Large Language Models*, arXiv preprint arXiv:2401.11817, 2024.

Ziwei Xu, Yogesh S Rawat, Yongkang Wong, Mohan S Kankanhalli, and Mubarak Shah, *Don't Pour Cereal into Coffee: Differentiable Temporal Logic for Temporal Action Segmentation*, NeurIPS 2022 (25% acceptance rate).

Ziwei Xu, Xudong Shen, Yongkang Wong, and Mohan S Kankanhalli, *Unsupervised Motion Representation Learning with Capsule Autoencoders*, NeurIPS, 2021 (26% acceptance rate).

Ziwei Xu, Guangzhi Wang, Yongkang Wong, and Mohan S Kankanhalli, *Relation-aware Compositional Zero-shot Learning for Attribute-Object Pair Recognition*, IEEE Transactions on Multimedia, 2021.

Junnan Li*, **Ziwei Xu***, Yongkang Wong, Qi Zhao, and Mohan S Kankanhalli, *GradMix: Multi-source Transfer across Domains and Tasks*, WACV, 2020.

Yaqi Xie*, **Ziwei Xu***, Kuldeep Meel, Mohan S Kankanhalli, and Harold Soh, *Embedding Symbolic Knowledge into Deep Networks*, NeurIPS, 2019 (21% acceptance rate).

* equal contributions.

Community Services

PC Member: AAAI, IJCAI, WACV, NeurIPS, ICLR, ICML, UAI

Awards

Oct 2016	Outstanding Student Scholarship (for top 10% students), USTC
Dec 2016	Honored Enroller of <i>The Talent Program in Computer and Info. Sci. and Tech.</i> , USTC
Jul 2017	Outstanding Graduates, USTC
Dec 2020	Research Achievement Award, School of Computing, NUS
Aug 2022	Research Achievement Award, School of Computing, NUS