Xiaohan Zhang

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Research Interests

Computer Vision, Deep Learning, Visual Geo-Localization, Information Retrieval, Generative Model, Large Vision-Language Model, AI-driven Therapeutics Discovery, Machine Learning in Computational Biology

Education

2020 – Present **University of Vermont** – Burlington, Vermont
Ph.D. student, Computer Science
Advisor: Dr. Safwan Wshah
GPA: 3.91.

2018 – 2020 **University of California, Santa Cruz** – Santa Cruz, California
M.Sc., Computer Engineering
Advisor: Dr. Roberto Manduchi
GPA: 3.91.

2013 – 2017 **Michigan State University** – East Lansing, Michigan
B.Sc., Computer Engineering
GPA: 3.26.

Honors and Awards

2024 UAVM'24@ACM Multimedia outstanding reviewer (ACM Multimedia 2024 2nd Workshop on UAVs in Multimedia: Capturing the World from a New Perspective)

2023 Computer Science Graduate Award (The University of Vermont College of Engineering and Mathematical Sciences)

2023 AAAI Student Scholarship (Association for the Advancement of Artificial Intelligence)

2022 Second Prize in UVM Computing Student Research Day (UVM CSRD '22)

Publications

2025 **VICI: VLM-Instructed Cross-view Image-localisation**
Xiaohan Zhang, Tavis Shore, Chen Chen, Oscar Mendez, Simon Hadfield, Safwan Wshah
ACMMM 2025 Workshop UAVs in Multimedia.

2024 **Cross-View Meets Diffusion: Aerial Image Synthesis with Geometry and Text Guidance**
Ahmad Arrabi, **Xiaohan Zhang**, Waqas Sultan, Chen Chen, Safwan Wshah
Proceedings of the IEEE/CVF Winter Conference on Applications of Computer Vision. 2025.

2024 **Fine-Grained Permeable Surface Mapping through Parallel U-Net**
Nathaniel Ogilvie, **Xiaohan Zhang**, Cale Kochenour, Safwan Wshah
Sensors 2024, 24(7), 2134; https://doi.org/10.3390/s24072134

2023 **GeoDTR+: Toward generic cross-view geolocalization via geometric disentanglement**
Xiaohan Zhang, Xingyu Li, Waqas Sultani, Chen Chen, Safwan Wshah.
IEEE Transactions on Pattern Analysis and Machine Intelligence

2023 **Cross-view Geo-localization via Learning Disentangled Geometric Layout Correspondence**
Xiaohan Zhang, Xingyu Li, Waqas Sultani, Yi Zhou, and Safwan Wshah.
Proceedings of the AAAI Conference on Artificial Intelligence

2023 **Image and Object Geo-Localization**
Daniel Wilson, **Xiaohan Zhang**, Waqas Sultani, and Safwan Wshah.
International Journal of Computer Vision

2023 **Cross-View Image Sequence Geo-localization**
Xiaohan Zhang, Waqas Sultani, and Safwan Wshah.
Proceedings of the IEEE/CVF Winter Conference on Applications of Computer Vision. 2023.

2022 **LanePainter: Lane Marks Enhancement via Generative Adversarial Network**
Xiaohan Zhang and Safwan Wshah.
2022 26th International Conference on Pattern Recognition (ICPR), Montreal, QC, Canada, 2022, pp. 3668-3675, doi: 10.1109/ICPR56361.2022.9956446.

2022 **Object Tracking and Geo-Localization from Street Images**
Daniel Wilson, Thayer Alshaabi, Colin Van Oort, **Xiaohan Zhang**, Jonathan Nelson, and Safwan Wshah.
Remote Sens. 2022, 14(11), 2575; https://doi.org/10.3390/rs14112575

2022 **Low-light Image Enhancement Using Chain-consistent Adversarial Networks**
Minghao Liu, Jiahao Luo, **Xiaohan Zhang**, Yang Liu, and James Davis.
2022 26th International Conference on Pattern Recognition (ICPR), Montreal, QC, Canada, 2022, pp. 713-719, doi: 10.1109/ICPR56361.2022.9956704.

2021 **Visual and Object Geo-localization: A Comprehensive Survey**
Daniel Wilson, **Xiaohan Zhang**, Waqas Sultani, and Safwan Wshah.
arXiv preprint arXiv:2112.15202

Conference Reviewer

The IEEE/CVF Conference on Computer Vision and Pattern Recognition **2024**, **2025**

European Conference on Computer Vision **2024**

AAAI Conference on Artificial Intelligence **2025**, **2026**

European Conference on Artificial Intelligence **2025**

ACM Multimedia Systems Conference **2024**, **2025**

Journal Reviewer

IEEE Transactions on Neural Networks and Learning Systems

ISPRS Journal of Photogrammetry and Remote Sensing

IEEE Transactions on Geoscience and Remote Sensing

IEEE Transactions on Circuits and Systems for Video Technology

IEEE Robotics and Automation Letters

MDPI Remote Sensing

npj Drug Discovery