Xiaohan Zhang

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Research Interests

Computer Vision, Deep Learning, Image Retrieval, Image Synthesis, Visual Geo-Localization, 3D Reconstruction

Education

2020 – Present	**University of Vermont** – Burlington, Vermont Ph.D. student, Computer Science Advisor: Safwan Wshah *GPA: 3.91.*
2018 – 2020	**University of California, Santa Cruz** – Santa Cruz, California M.Sc., Computer Engineering Advisor: Roberto Manduchi *GPA: 3.91.*
2013 – 2017	**Michigan State University** – East Lansing, Michigan B.Sc., Computer Engineering *GPA: 3.26.*

Prizes and Scholarships

2023	Computer Science Graduate Award (The University of Vermont College of Engineering and Mathematical Sciences)
2023	AAAI-23 Student Scholarship (Association for the Advancement of Artificial Intelligence)
2022	Second Prize in UVM Computing Student Research Day (UVM CSRD '22)

Publications

2024   **Cross-View Meets Diffusion: Aerial Image Synthesis with Geometry and Text Guidance**

Ahmad Arrabi, **Xiaohan Zhang**, Waqas Sultan, Chen Chen, Safwan Wshah

https://arxiv.org/abs/2408.04224

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

Reviewer for Journals and Conferences

The IEEE/CVF Conference on Computer Vision and Pattern Recognition

European Conference on Computer Vision

AAAI Conference on Artificial Intelligence

IEEE Transactions on Neural Networks and Learning Systems

ACM Multimedia Systems Conference

MDPI Remote Sensing

IEEE Transactions on Geoscience and Remote Sensing

IEEE Transactions on Circuits and Systems for Video Technology

ISPRS Journal of Photogrammetry and Remote Sensing