

Mo Zhou

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STATUS	Chinese citizen	
CURRENT	<ul style="list-style-type: none">Amazon.com Services LLC, Ring AI Applied Scientist (Vision Language Model)	Bellevue, WA 98004 01/2026 - Current
INTERESTS	<ul style="list-style-type: none">Deep Learning, Computer Vision, and Multi-modality ModelsArtificial Intelligence Security, Robustness and TrustworthinessLinux Operating System Development and Administration	
EXPERIENCE	<ul style="list-style-type: none">Google Research, Computational Imaging Team Student Researcher (Computer Vision) <i>Mentor: Hossein Talebi, Keren Ye, Mauricio Delbracio, Peyman Milanfar</i>Microsoft Research, Applied Sciences Group Research Intern (Deep Learning) <i>Mentor: Kazuhito Koishida, Saeed Amizadeh</i>Wormpex AI Research LLC Research Intern (Computer Vision) <i>Mentor: Haoxiang Li, Yiding Yang, Gang Hua</i>Xi'an Jiaotong University Institute of Artificial Intelligence and Robotics (IAIR) Research Assistant (Computer Vision) <i>Supervisor: Le Wang, Sanping Zhou</i>	Mountain View, CA 94043 05/2024 - 10/2025 Redmond, WA 98052 05/2023 - 08/2023 Bellevue, WA 98004 05/2022 - 08/2022 Xi'an, Shaanxi 710049 07/2020 - 06/2021
EDUCATION	<ul style="list-style-type: none">Johns Hopkins University Dept. Electrical and Computer Engineering, Whiting School of Engineering <i>Ph.D. Electrical and Electronics Engineering</i> <i>Advisor: Vishal M. Patel</i>Xidian University <i>M.Eng. Pattern Recognition and Intelligent Systems. July, 2020</i> <i>Thesis: Coherent Visual-Semantic Embedding for Cross-Modal Retrieval</i> <i>Advisor: Zhenxing Niu</i>Xidian University <i>B.Eng. Electromagnetic Field and Wireless Technology. July, 2017</i> <i>Advisor: Zhenxing Niu</i>	Baltimore, MD, USA 21218 08/2021 - 12/2025 Xi'an, Shaanxi, China 710071 09/2017 - 06/2020 Xi'an, Shaanxi, China 710126 09/2013 - 07/2017
PUBLICATIONS	Google Scholar Profile: scholar.google.com/citations?user=BVIO95UAAAAJ (Feb. 14 2026) Citations: 1880 H-Index: 11 i10-Index: 11 Other Identifiers: [ORCID] [Publons] [Semantic Scholar] [Web of Science] [DBLP]	

JOURNAL ARTICLES:

(2 TPAMI, 1 TMLR, 1 TMM)

- [arXiv] [J01] Mo Zhou, Yiding Yang, Haoxiang Li, Vishal M. Patel, Gang Hua, “*Deployment Prior Injection for Run-time Re-biasable Object Detection*,” IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI), 2026.
- [Openreview] [arXiv] [J02] Yatong Bai, Mo Zhou, Vishal M. Patel, Somayeh Sojoudi, “*MixedNUTS: Training-Free Accuracy-Robustness Balance via Nonlinearly Mixed Classifiers*,” Transactions on Machine Learning Research (TMLR), 2024.
- [PDF] [arXiv] [Github] [J03] Mo Zhou, Le Wang, Zhenxing Niu, Qilin Zhang, Nanning Zheng, Gang Hua, “*Adversarial Attack and Defense in Deep Ranking*,” IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI), 2024. DOI: 10.1109/TPAMI.2024.3365699
- [PDF] [J04] Le Wang, Mo Zhou, Zhenxing Niu, Qilin Zhang, Nanning Zheng, “*Adaptive Ladder Loss for Learning Coherent Visual-Semantic Embedding*,” IEEE Transactions on Multimedia (TMM), 2021. DOI: 10.1109/TMM.2021.3139210

CONFERENCE PAPERS:

(3 CVPR, 3 ICCV, 1 ECCV, 1 NeurIPS, 1 ICLR, 1 AAAI)

- [C1] Mucong Ding, Bang An, Tahseen Rabbani, Chenghao Deng, Anirudh Satheesh, Souradip Chakraborty, Mehrdad Saberi, Yuxin Wen, Kyle Rui Sang, Aakriti Agrawal, Xuandong Zhao, Mo Zhou, Mary-Anne Hartley, Lei Li, Yu-Xiang Wang, Vishal M. Patel, Soheil Feizi, Tom Goldstein, Furong Huang, “*A Technical Report on “Erasing the Invisible”: The 2024 NeurIPS Competition on Stress Testing Image Watermarks”* in NeurIPS 2025 Datasets and Benchmarks Track, 2025.
- [PDF] [arXiv] [C2] Mo Zhou, Keren Ye, Mauricio Delbracio, Peyman Milanfar, Vishal M. Patel, Hossien Talebi, “*UniRes: Universal Image Restoration for Complex Degradations*,” in Proc. IEEE International Conf. on Computer Vision (ICCV), 2025.
- [PDF] [arXiv] [C3] Kangfu Mei, Mo Zhou, Vishal M. Patel, “*Field-DiT: Diffusion Transformer on Unified Video, 3D, and Game Field Generation*,” in Proc. International Conference on Learning Representations (ICLR), 2025.
- [PDF] [arXiv] [Github] [C4] Mo Zhou, Vishal M. Patel, “*On Trace of PGD-Like Adversarial Attacks*,” in Proc. International Conference on Pattern Recognition (ICPR), 2024.
- [PDF] [Github] [C5] Yiqun Mei, Pengfei Guo, Mo Zhou, Vishal M. Patel, “*Resource-Adaptive Federated Learning with All-In-One Neural Composition*,” Advances in Neural Information Processing Systems (NeurIPS), 2022.
- [PDF] [arXiv] [Github] [C6] Mo Zhou, Vishal M. Patel, “*Enhancing Adversarial Robustness for Deep Metric Learning*,” in Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR), 2022.
- [PDF] [arXiv] [Github] [C7] Mo Zhou, Le Wang, Zhenxing Niu, Qilin Zhang, Yinghui Xu, Nanning Zheng, Gang Hua, “*Practical Order Attack in Deep Ranking*,” in Proc. IEEE International Conf. on Computer Vision (ICCV), 2021.
- [PDF] [arXiv] [Github] [C8] Liushuai Shi, Le Wang, Chengjiang Long, Sanping Zhou, Mo Zhou, Zhenxing Niu, Gang Hua, “*SGCN: Sparse Graph Convolution for Pedestrian Trajectory Prediction*,” In Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR), 2021.
- [PDF] [arXiv] [Github] [C9] Mo Zhou, Zhenxing Niu, Le Wang, Qilin Zhang, Gang Hua, “*Adversarial Ranking Attack and Defense*,” in Proc. European Conf. on Computer Vision (ECCV), 2020.
- [PDF] [arXiv] [Github] [C10] Mo Zhou, Zhenxing Niu, Le Wang, Zhanning Gao, Qilin Zhang, Gang Hua, “*Ladder Loss for Coherent Visual-Semantic Embedding*,” in Proc. AAAI Conf. on Artificial Intelligence (AAAI), 2020.
- [PDF] [C11] Zhenxing Niu, Mo Zhou, Le Wang, Xinbo Gao, Gang Hua, “*Hierarchical Multimodal LSTM for Dense Visual-Semantic Embedding*,” in Proc. IEEE International Conf. on Computer Vision (ICCV), 2017.
- [PDF] [Dataset] [C12] Zhenxing Niu, Mo Zhou, Le Wang, Xinbo Gao, Gang Hua. “*Ordinal Regression with Multiple Output CNN for Age Estimation*,” in Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR), 2016.


PREPRINT / UNDER-REVIEW PAPERS:

- [arXiv] [X01] Mo Zhou, Keren Ye, Viraj Shah, Kangfu Mei, Mauricio Delbracio, Peyman Milanfar, Vishal M. Patel, Hossien Talebi, “*Reference-Guided Identity Preserving Face Restoration*,” 2025, Under Review.
- [arXiv] [Github] [X02] Yu Zeng*, Mo Zhou*, Yuan Xue, Vishal M. Patel, “*Securing Deep Generative Models with Universal Adversarial Signature*,”, 2023, Under Review.

PATENTS

- [P01] Le Wang, Mo Zhou, Sanping Zhou, Shitao Chen, Jingmin Xin, Nanning Zheng, “A Practical Relative Order Adversarial Attack Method”. Chinese Patent No. 202110998691.9.
- [P02] Zhenxing Niu, Wei Xue, Mo Zhou, Bo Yuan, Xinbo Gao, Gang Hua, “Age estimation method based on multi-output convolution neural network and ordered regression”. Chinese Patent No. 201610273524.7.

ACTIVITIES

- Reviewer of International Conferences
 - IEEE Conf. on Computer Vision and Pattern Recognition (CVPR) 2020 – 2025
 - Annual Conf. on Neural Information Processing Systems (NeurIPS) 2022 – 2025
 - International Conf. on Computer Vision (ICCV) 2021 – 2025
 - European Conf. on Computer Vision (ECCV) 2020 – 2024
 - International Conf. Learning Representations (ICLR) 2022 – 2025
 - International Conf. of Machine Learning (ICML) 2023 – 2024
 - Others, incl.: AAAI, WACV, ACCV, ICPR, etc. 2021 – 2025
- Reviewer of International Journals
 - IEEE Trans. on Pattern Analysis and Machine Intelligence (TPAMI) 2021 – 2023
 - Springer Journal: International Journal of Computer Vision (IJCV) 2023 – 2025
 - IEEE Trans. on Dependable and Secure Computing (TDSC) 2022
 - Others, incl.: TNNLS, TMM, NeuNet, NeuComp, MVA, CAIS, etc. 2021 – 2024
- Organizer of International Workshop and Competition
 - Erasing the Invisible: A Stress-Test Challenge for Image Watermarks NeurIPS 2024
 - 4th Workshop of Adversarial Machine Learning on Computer Vision CVPR 2024
 - 4th Workshop on Adversarial Robustness In the Real World ICCV 2023
- Volunteer in Free and Open-Source Software Communities
 -  **Official Developer** for Debian GNU/Linux 08/2018 – Current
 -  **Contributor** for Gentoo GNU/Linux 06/2019 – 08/2019
 - Google Summer of Code (GSoC) as Mentor w/ Debian Project 2025
Project: *Packaging LLM Inference Libraries* (Student: Kohei Sendai)
 - Open Source Promotion Plan (OSPP) w/ Tsinghua University TUNA Association 2020
Project: *Integrating Data Science Software into Debian (Best Quality Award)*
 - Google Summer of Code (GSoC) as Student w/ Debian Project 2020
Project: *BLAS/LAPACK Ecosystem Enhancement for Debian*
 - Google Summer of Code (GSoC) as Student w/ Gentoo Foundation 2019
Project: *BLAS and LAPACK Runtime Switching*

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TEACHING

- Deep Learning (EN . 520 . 638 . 01 . SP25), Johns Hopkins University Spring 2025
Teaching Assistant for Prof. Vishal M. Patel

HONORS	• <u>Outstanding Reviewer</u> for CVPR 2024	2024
	• <u>Outstanding Reviewer</u> for ICCV 2021	2021
	• Xidian University Secondary School Scholarship. ⁺	2017-2018
	• Interdisciplinary Contest in Modeling (ICM) Meritorious Winner. Advisor: Youlong Yang (Xidian University)	2016
AFFILIATION	• Student Member, IEEE	Aug 2021 – Dec 2025
REFERENCES	AVAILABLE UPON REQUEST.	