

Mo Zhou

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STATUS	Chinese citizen	
CURRENT	• Amazon.com Services LLC, Ring AI Applied Scientist (Vision Language Model)	Bellevue, WA 98004 01/2026 - Current
INTERESTS	• Deep Learning, Computer Vision, and Multi-modality Models • Artificial Intelligence Security, Robustness and Trustworthiness • Linux Operating System Development and Administration	
EXPERIENCE	• Google Research, Computational Imaging Team Student Researcher (Computer Vision) <i>Mentor: Hossein Talebi, Keren Ye, Mauricio Delbracio, Peyman Milanfar</i>	Mountain View, CA 94043 05/2024 - 10/2025
	• Microsoft Research, Applied Sciences Group Research Intern (Deep Learning) <i>Mentor: Kazuhito Koishida, Saeed Amizadeh</i>	Redmond, WA 98052 05/2023 - 08/2023
	• Wormpex AI Research LLC Research Intern (Computer Vision) <i>Mentor: Haoxiang Li, Yiding Yang, Gang Hua</i>	Bellevue, WA 98004 05/2022 - 08/2022
	• Xi'an Jiaotong University Institute of Artificial Intelligence and Robotics (IAIR) Research Assistant (Computer Vision) <i>Supervisor: Le Wang, Sanping Zhou</i>	Xi'an, Shaanxi 710049 07/2020 - 06/2021
EDUCATION	• 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>	Baltimore, MD, USA 21218 08/2021 - 12/2025
	• Xidian University <i>M.Eng.</i> Pattern Recognition and Intelligent Systems. July, 2020 <i>Thesis: Coherent Visual-Semantic Embedding for Cross-Modal Retrieval</i> <i>Advisor: Zhenxing Niu</i>	Xi'an, Shaanxi, China 710071 09/2017 - 06/2020
	• Xidian University <i>B.Eng.</i> Electromagnetic Field and Wireless Technology. July, 2017 <i>Advisor: Zhenxing Niu</i>	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*

TEACHING

- Deep Learning (EN.520.638.01.SP25), Johns Hopkins University Spring 2025
Teaching Assistant for Prof. Vishal M. Patel

HONORS	<ul style="list-style-type: none">• <u>Outstanding Reviewer</u> for CVPR 2024• <u>Outstanding Reviewer</u> for ICCV 2021• Xidian University Secondary School Scholarship.⁺• Interdisciplinary Contest in Modeling (ICM) Meritorious Winner. Advisor: Youlong Yang (Xidian University)	2024 2021 2017-2018 2016
AFFILIATION	• Student Member, IEEE	Aug 2021 – Dec 2025
REFERENCES	AVAILABLE UPON REQUEST.	