HAORAN TANG

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EDUCATION

University of Pennsylvania *May 2023*
Master of Science in Engineering, Robotics GPA: 3.97/4.0
Master's Thesis: "Navigating the Task Manifold" (Prof. Pratik Chaudhari)

University of Illinois at Urbana-Champaign *May 2021*
Bachelor of Science, Computer Engineering GPA: 3.73/4.0
Minor in Mathematics

EXPERIENCE

Research Intern, Generative AI *June 2023 - Present*
Baidu USA Sunnyvale, CA

- Improve LDM architectures to enable multi-source image conditions for better personalization and image generations.
- Construct a new dataset based on anime figures for futures tasks such as poses and activities.

Research Assistant, Multitask Learning *September 2022 - Present*
University of Pennsylvania, Prof. Pratik Chaudhari Philadelphia, PA

- Explore the low-dimensionality of multiple tasks in the prediction space as a manifold.
- Embed the task trajectories as more informative foundation priors for transfer learning.

Research Assistant, Autoencoders *May 2022 - September 2022*
University of Pennsylvania, Prof. Jianbo Shi Philadelphia, PA

- Investigate non-parametric multi-resolution hash tables as intermediate layers of autoencoders.
- Study near-convolutional properties of hash functions such as translational invariance.

Research Assistant, Contrastive Learning *June 2021 - May 2023*
University of Illinois at Urbana-Champaign, Prof. Yuxiong Wang Champaign, IL

- Design systematic corruption to investigate the dependency of contrastive learning on spatial inductive bias.
- Explain the higher dependency of CL than SL with feature space analysis and extensive ablations.

PUBLICATIONS AND PREPRINTS

Contrastive Learning Relies More on Spatial Inductive Bias Than Supervised Learning: An Empirical Study
Yuanyi Zhong*, Haoran Tang*, Junkun Chen, Yuxiong Wang ICCV 2023

HashEncoding: Autoencoding with Multiscale Coordinate Hashing
Lukas Zhornyak*, Zhengjie Xu*, Haoran Tang*, Jianbo Shi arXiv

Shuffle Augmentation of Features from Unlabeled Data for Unsupervised Domain Adaptation
Changwei Xu*, Jianfei Yang*, Haoran Tang, Han Zou, Cheng Lu, Tianshuo Zhang arXiv

Bi-Adversarial Discrepancy Minimization for Unsupervised Domain Adaptation on 3D Point Cloud
Haoran Tang, Changwei Xu, Jianfei Yang IJCNN 2021

SERVICE

Conference Reviewer	CVPR (2022, 2023), ECCV (2022), ICCV (2023)
Teaching Assistant	CIS 6800 Advanced Topics in Machine Perception, University of Pennsylvania

SKILLS

Programming Languages	Python, C++
Tools/Softwares	PyTorch, Scikit-Learn, Git, SSH, Jupyter Notebook, VS Code
Operating Systems	Linux, Mac OS, Windows