

HAORAN TANG

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EDUCATION

University of Pennsylvania

Master of Science in Engineering, Robotics

Master's Thesis: "Navigating the Task Manifold" (Prof. Pratik Chaudhari)

May 2023

GPA: 3.97/4.0

University of Illinois at Urbana-Champaign

Bachelor of Science, Computer Engineering

Minor in Mathematics

May 2021

GPA: 3.73/4.0

EXPERIENCE

Research Intern, Generative AI

Baidu USA

June 2023 - Present

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

University of Pennsylvania, Prof. Pratik Chaudhari

September 2022 - Present

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

University of Pennsylvania, Prof. Jianbo Shi

May 2022 - September 2022

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

University of Illinois at Urbana-Champaign, Prof. Yuxiong Wang

June 2021 - May 2023

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
Teaching Assistant

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

SKILLS

Programming Languages
Tools/Softwares
Operating Systems

Python, C++
PyTorch, Scikit-Learn, Git, SSH, Jupyter Notebook, VS Code
Linux, Mac OS, Windows