JIANKE (STEVEN) YANG

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EDUCATION

UNIVERSITY OF CALIFORNIA SAN DIEGO, San Diego, CA — Sep 2022 - Present
PhD in Computer Science

- Advisor: Prof. Rose Yu
- Research area: Geometric Deep Learning, Generative AI, Physics-Guided Deep Learning

TSINGHUA UNIVERSITY, Beijing, China — Sep 2018 - Jun 2022
Bachelor in Computer Science and Technology; Minor in Statistics

- Major GPA: 3.94/4; Rank: 5/231

PUBLICATIONS

Jianke Yang, Nima Dehmamy, Robin Walters, and Rose Yu. Latent Space Symmetry Discovery. *arXiv preprint arXiv: 2310.00105*, 2023.

Jianke Yang, Robin Walters, Nima Dehmamy, and Rose Yu. Generative Adversarial Symmetry Discovery. *International Conference on Machine Learning (ICML)*, 2023.

HONORS & AWARDS

- Academic Excellence Award (2019, 2020, 2021) at Tsinghua University
- First Prize (2020) in China National Contest of Mathematical Modeling for Undergraduates

WORK EXPERIENCE

Research Intern, NEC Laboratories — Jun 2023 - Sep 2023

- Diffusion model for human motion generation
- Incorporate physics simulator into training to perform physically valid generation

RESEARCH EXPERIENCE

Research Assistant, USC Melady Lab (Advisor: Prof. Yan Liu) — Jul 2021 - Jan 2022

- Multi-Domain Federated Learning
  - Implemented several federated learning baselines
  - Derived the mathematical formulation of the problem

Research Assistant, THUIR (Advisor: Prof. Yiqun Liu) — Mar 2021 - Jun 2021

- Understanding Non-Click Results in Web Search with Brain Signals
  - Designed the web platform for a user study on clicking behavior in web search
  - Hosted the user study as the main experimenter

Research Assistant, MIT-IBM Watson AI Lab (Advisor: Chuang Gan) — Jul 2020 - Nov 2020

- Situated Reasoning Q&A in Real-World Videos
  - Carried out a background study on existing video question answering datasets
  - Constructed a VQA dataset that involved counterfactual, causal, and predictive reasoning

INVITED TALKS

- (Oct 2023) **SciML Webinar**, University of Michigan
- (Mar 2023) **ML in Physics (Guest Lecture)**, UC San Diego

COURSE PROJECTS

Domain Adaptation on Image Classification by Feature Disentangling Spring 2021

- The goal was to construct a robust image classification model under distribution shift
- Did in-depth research on domain adaptation and found some feature disentangling methods to deal with non-i.i.d. data
- Implemented an adversarial disentangled autoencoder for of non-i.i.d. image classification

Large-Scale Network Embedding Based on Randomized Matrix Decomposition Spring 2021

- Implemented *ssrNetMF*, a scalable graph embedding algorithm with low computational cost, in C
- Reached a speed-up ratio of 5.53x compared to baseline methods through parallelization techniques

PROGRAMMING SKILLS

Python, R, MATLAB, C/C++, Java, Rust