MENGXI WU

website ◇ mengxiwu@usc.edu

EDUCATION

University of Southern California 2022.8 - Present
Doctor of Philosophy, Computer Science

New York University 2021.5
Master of Science, Computer Science

University of Michigan, Ann Arbor 2019.5
Bachelor of Science in Engineering, Electrical Engineering

PUBLICATIONS

Mengxi Wu, Mohammad Rostami. "Graph Harmony: Denoising and Nuclear-Norm Wasserstein Adaptation for Enhanced Domain Transfer in Graph-Structured Data." *Transactions on Machine Learning Research 2024*

Mengxi Wu, Yi-Jen Chiang, Christopher Musco. "Streaming Approach to In Situ Selection of Key Time Steps for Time-Varying Volume Data." *Eurographics/IEEE Conference on Visualization 2022*

Mengxi Wu, Hao Huang, Yi Fang. "3D Point Cloud Completion with Geometric-Aware Adversarial Augmentation." *International Conference on Pattern Recognition 2022*

RESEARCH EXPERIENCE

USC Information Science Institute 2022.6 - Present
Research Assistant, Advised by Prof.Mohammad Rostami

· Conducted research on machine learning in data-scarce scenarios with theoretical analysis, focusing on transfer learning, domain adaptation, continual learning, zero-shot learning, and few-shot learning.

NYU Multimedia and Visual Computing Lab 2021.3 - 2022.5
Research Assistant, Advised by Prof.Yi Fang

· Conducted research on geometric-aware adversarial training methods for 3D point cloud completion.
· Designed a novel adversarial attack method that constrains adversarial perturbations with absolute minimum curvature direction of original data and published the results on ICPR 2022.

NYU Algorithms and Foundations Group 2020.6 - 2022.4
Research Assistant, Advised by Prof.Yi-Jen Chiang and Prof.Christopher Musco

· Conducted research on in situ selection of key time steps for high dimensional time-varying data.
· Developed a new greedy algorithm with numerical linear algebra techniques to compute linear interpolation solutions and errors in an online streaming fashion and published the results on EuroVis 2022.

WORK EXPERIENCE

Huawei 2021.9 - 2022.5
Algorithm Engineer, Network AI Engine Department

· Developed intelligent systems to detect fire, smoke, and helmet in 2D images captured from cameras on construction sites.
· Adjusted and trained the state-of-the-art 2D object detection models (e.g., YOLOR, YOLOX).

· Integrated detection models with techniques such as Knowledge Distillation and Memory Replay to enable class-incremental learning.

TEACHING EXPERIENCE

CSCI 544: Applied Natural Language Processing
Teaching Assistant, University of Southern California

CSCI 570: Analysis of Algorithms
Teaching Assistant, University of Southern California

ECE-GY 9123: Deep Learning
Teaching Assistant, New York University

SERVICES

Conference Reviewing

EMNLP 2023

TECHNICAL SKILLS

Programming Languages	C/C++, Python, Java, R, MATLAB, Swift
Libraries and Tools	PyTorch, Tensorflow, PySpark, Hadoop