CHANGHAO SHI

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EDUCATION:

University of California, San Diego La Jolla, CA
Ph.D. in Electrical and Computer Engineering (3.95/4.00) 09/2018-Present

- Research interests: statistical learning, deep learning, generative modeling, graph machine learning, computer vision, signal processing, computational neuroscience
- Thesis title: Generalizing Graph Laplacian Learning - from a Graph Signal Processing Perspective

Beihang University Beijing, China
B.S. in Biomedical Engineering (3.81/4.00) 09/2014-06/2018

- Awards: Beihang Academic Excellence Scholarship, Beihang Competition Excellence Scholarship, the First Prize of Chinese National College Mathematics Competition

PUBLICATIONS:

[1] **C. Shi**, C. Holtz and G. Mishne, "Online adversarial purification based on self-supervised learning," in ICLR, 2020.

[2] **C. Shi**, S. Schwartz, S. Levy, S. Achvat, M. Abboud, A. Ghanayim, J. Schiller and G. Mishne, "Learning Disentangled Behavior Embeddings," in NeurIPS (spotlight), 2021.

[3] H. Ni, **C. Shi**, K. Li, S. X. Huang and M. R. Min, "Conditional Image-to-Video Generation with Latent Flow Diffusion Models," in CVPR, 2023.

[4] **C. Shi**, H. Ni, K. Li, S. Han, M. Liang and M. R. Min, "Exploring Compositional Visual Generation with Latent Classifier Guidance," in CVPR Workshop, 2023.

[5] **C. Shi** and G. Mishne, "Cartesian Product Graph Learning with Laplacian Constraints," in AISTATS, 2023.

[6] **C. Shi** and G. Mishne, "Graph Laplacian Learning with Exponential Family Noise," in IEEE journal submission, 2023.

INTERNSHIPS:

NEC Laboratories America Inc. Princeton, NJ
Machine Learning Research Intern Summer 2022

- Explore compositionality in deep generative models for controllable image and video generation.
- Use conditional diffusion models with classifier and classifier-free guidance.

TEACHING:

- Teaching Assistant, ECE 15: Engineering Computation UCSD 2020
- Teaching Assistant, ECE 209: Statistical Learning for Bio-signal Processing UCSD 2020
- Teaching Assistant, ECE 271a: Statistical Learning UCSD 2019

SKILLS:

- Programming: Python, PyTorch, Matlab, C++, SQL
- Courses: Probability & Statistics, Statistical Learning, Deep Learning and Neural Networks, Deep Generative Models, Spectral Graph Theory, Data Science, Signal Processing, Computer Vision