Puja Trivedi

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Education

University of Michigan, College of Engineering — *Aug 2019 - May 2024*
PhD Candidate in Computer Science and Engineering
Advisor: Danai Koutra

University of Maryland, Baltimore County — *May 2019*
BS in Mathematics, *summa cum laude*
BS in Computer Science, *summa cum laude*

Research Interests

Self-supervised Graph Representation Learning, Robust and Safe Machine Learning

Publications

[10]: **Puja Trivedi**, Danai Koutra, and Jayaraman J. Thiagarajan. On the Efficacy of Generalization Error Prediction Scoring Functions. *ICASSP*, 2023.

[9]: **Puja Trivedi**, Danai Koutra, and Jayaraman J. Thiagarajan. A Closer Look at Model Adaptation using Feature Distortion and Simplicity Bias. *ICLR*, 2023. spotlight

[8]: **Puja Trivedi**, Danai Koutra, and Jayaraman J. Thiagarajan. Exploring the Design of Adaptation Protocols for Improved Generalization and Machine Learning Safety. *Principles of Distribution Shift Workshop at ICML*, 2022.

[7]: **Puja Trivedi**, Ekdeep Singh Lubana, Mark Heimann, Danai Koutra, and Jayaraman J. Thiagarajan. Analyzing Data-Centric Properties for Contrastive Learning on Graphs. *NeurIPS*, 2022.

[6]: **Puja Trivedi**, Ekdeep Singh Lubana, Mark Heimann, Danai Koutra, and Jayaraman J. Thiagarajan. A Content-First Benchmark for Self-Supervised Graph Representation Learning. *GLB Workshop at WebConf*, 2022.

[5]: **Puja Trivedi**, Ekdeep Singh Lubana, Yujun Yan, Yaoqing Yang, and Danai Koutra. Augmentations in Graph Contrastive Learning: Current Methodological Flaws & Towards Better Practices. *The WebConf*, 2022.

[4]: Fatemeh Vahedian, Ruiyu Li, **Puja Trivedi**, Di Jin, Danai Koutra. Convolutional Neural Network Dynamics: A Graph Perspective. *CIKM, short paper track*, 2022.

[3]: Ekdeep Singh Lubana, **Puja Trivedi**, Danai Koutra, and Robert P. Dick. How do Quadratic Regularizers Prevent Catastrophic Forgetting: The Role of Interpolation. *Conference on Lifelong Learning Agents (CoLLAs)*, 2022.

[2]: Ekdeep Singh Lubana, **Puja Trivedi**, Conrad Hougen, Robert P. Dick and Alfred O. Hero. OrthoReg: Robust Network Pruning Using Orthonormality Regularization. *arXiv:cs.CV*, 2020.

[1]: **Puja Trivedi**, Alican Buyukcakir, Yin Lin, Yin Long Qian, Di Jin, Danai Koutra. On Structural vs. Proximity-based Temporal Node Embeddings. *In Proc. ACM SIGKDD: Workshop on Mining and Learning with Graphs*, 2020

Experience

Lawrence Livermore National Laboratory, Livermore,CA — *May 2021 - Present*
Research Intern, Unsupervised Graph Representation Learning, Out of Distribution Detection

Smart Information Flow Technologies, Minneapolis,MN *Summer 2018, 2019*
Research Intern, Bayesian Experimental Modeling project

Princeton Neuroscience Institute, Princeton,NJ *Summer 2017*
REU Student, Learning an unsupervised postural manifold for naturalistic animal behavior

Worcester Polytechnic Institute, Worcester,MA *Summer 2016*
REU Student, Multi-task learning for convolutional neural networks classifying fMRI scans

Teaching

UMBC MATH151: Calculus I *Fall 18, Spring '19*
Teaching Assistant

UMBC MathLab *2016-2018*
Group & Individual Tutor

Honors & Awards

2019: Dwight F. Benton 1st Year Doctoral Fellowship

2019: Phi Beta Kappa

2019: Outstanding Graduating Senior in Computer Science and Mathematics

2019: Honors College Academic Achievement Award

2018: Pi Mu Epsilon

2015-2019: Meyerhoff Scholar

2015-2019: National Security Agency Scholar

Reviewing

Transactions on Knowledge Discovery From Data *2022*
Reviewer

ACM International Conference on Information and Knowledge Management (CIKM) *2020*
PC Member for Posters and Demos sessions.

The Web Conference (WWW) *2019,2020*
Sub-reviewer