

# Puja Trivedi

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## Education

University of Michigan, College of Engineering  
PhD Candidate in Computer Science and Engineering  
Advisor: Danai Koutra

Aug 2019 - May 2024

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

May 2019

## Research Interests

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

## Publications

[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

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*UMBC MATH151: Calculus I*

*Fall 18, Spring '19*

Teaching Assistant

*UMBC MathLab*

*2016-2018*

Group & Individual Tutor

## Honors & Awards

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**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

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*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