

Phillip Pope

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## EDUCATION

- 08/19 - Present **University of Maryland**; College Park, Maryland.  
PhD Candidate in Computer Science, Advisors: [David Jacobs](#), [Hong-Zhou Ye](#), 3.712 GPA
- 08/15 - 05/17 **New College, The Honors College of Florida**; Sarasota, Florida.  
Master of Data Science Program, Inaugural class, 3.92 GPA
- 08/09 - 12/13 **New College, The Honors College of Florida**; Sarasota, Florida.  
B.A. Applied Mathematics/Physics, Advisor: Patrick McDonald

## SELECT PUBLICATIONS

*Towards Combinatorial Generalization for Catalysts: A Kohn-Sham Charge-Density Approach*

**Pope P.**, Jacobs, D.

Published at *Thirty-seventh Conference on Neural Information Processing Systems (Neurips 2023)*

*The Intrinsic Dimension of Images and Its Impact on Learning*

**Pope P.**, Zhu C., Abdelkader, A., Goldblum, M., Goldstein, T.

Published at *The Tenth International Conference on Learning Representations (ICLR 2021)*

**Awarded Spotlight Presentation (3.8% overall acceptance rate)**

*Explainability Methods for Graph Convolutional Neural Networks*

**Pope, P.\***, Kolouri, S.\*, Rostrami, M., Martin, C., Hoffman, H.

Published at *The IEEE Conference on Computer Vision and Pattern Recognition (CVPR 2019)*

**Awarded Oral Presentation (5.5% overall acceptance rate)**

*A Comprehensive Study of Image Classification Model Sensitivity to Foregrounds, Backgrounds, and Visual Attributes*

Mazda, M., **Pope, P.**, Balaji, Y., Feizi, S.

Published at *The IEEE Conference on Computer Vision and Pattern Recognition (CVPR 2022)*

**Awarded Oral Presentation (4.2% overall acceptance rate)**

*Stochastic Training is Not Necessary for Generalization*

Geiping, J., Goldblum, M., **Pope, P.**, Moeller, M., and Goldstein, T.

Published at *The Tenth International Conference on Learning Representations (ICLR 2022)*

*Influence Functions in Deep Learning Are Fragile*

Basu, S.\*, **Pope, P.\***, Feizi, S.

Published at *The Tenth International Conference on Learning Representations (ICLR 2021)*

*Adversarial Robustness of Flow-Based Generative Models*

**Pope, P.\***, Balaji, Y.\*, Feizi, S.

Published at *The 23rd International Conference on Artificial Intelligence and Statistics (AISTATS 2020)*

*Sliced-Wasserstein Autoencoders*

Kolouri, S., **Pope, P.**, Martin, C., Rohde, G.

Published at *The Eighth International Conference on Learning Representations (ICLR 2019)*

## PATENTS

*System and method for discovering chemically active compounds of a molecule*

Kolouri, S., **Pope, P.**, Rostrami, M., Martin, C., Hoffmann, H.

US Patent 11,791,018, 2023

## WORK EXPERIENCE

02/18 - 06/19

**Machine Learning Researcher** - **Howard Hughes Research Laboratories**; Malibu, CA

Working with senior scientists at HRL, I researched deep learning on graphs (nodes, edges), explainable AI, and applications of the theory of *Optimal Transport* for machine learning, resulting in three publications and one patent.

01/17 - 02/18

**Machine Learning Engineer** - **Clarifai**; New York City, NY

As part of the Applied Machine Learning team, I worked on scalable transfer learning, domain specific detection models, human in the loop systems, active learning, and web crawling. I quantitatively improved the performance of models for Clarifai's largest enterprise customers, which required the largest (+1M images) experiments in *transfer learning* at that time.

11/14 - 10/15

**Data Scientist** - **DeepMile Networks**; Washington, D.C.

As a member of DeepMile's Data Science team, I analyzed social media data for clients in pharmaceuticals, energy, public relations, and others. Projects made extensive use of large scale graph analytic techniques.

## PROFESSIONAL SERVICE

2021-24

**ICLR Reviewer**

2021,23

**NeurIPS Reviewer**

2022,24

**ICML Reviewer**

2022-24

**TMLR Reviewer**

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