

Daniel Packer

Ph.D. Candidate – Department of Mathematics
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Summary / Statement

Daniel is an Applied Mathematics PhD candidate at the Ohio State University specializing in Data Science and Bayesian Machine Learning. His work interweaves pure mathematical theorems, abstract problem solving, and real-world application. He is interested in solving real-world data science and machine learning problems using rigorous and principled approaches.

Education

Ohio State University, Columbus, Ohio	
Ph.D. Student, Applied Mathematics,	2019-2024 (expected)
Bard College at Simon's Rock, Great Barrington, Massachusetts	
B.A., Mathematics, Summa Cum Laude	2014-2018

Honors and Awards

David Goss Technology and Academic Innovation Stimulus Prize	Awarded January 2023
Ohio State University Math Department	
Rhodus Graduate Research Fellowship	Awarded January 2022
Ohio State University Math Department	
First Year Graduate Teaching Award	Awarded September 2021
Ohio State University Math Department	
Division of Science, Mathematics, and Computing Award	Awarded May 2018
Bard College at Simon's Rock	

Academic Service

Treasurer	August 2022 - May 2023
SIAM Student Chapter at Ohio State University	
Mentor	August 2022 - May 2023
OSU Cycle	
Organizer	August 2022 - May 2023
Co-organizer	August 2021 - August 2022
Student Applied Math Seminar at Ohio State University	

Contributor

January 2021 - Present

Lean's Mathlib Community

Publications

Preprints

1. Shreya Arya, Arnab Auddy, Ranthony Edmonds, Sunhyuk Lim, Facundo Memoli, Daniel Packer. 2023.
The Gromov-Wasserstein distance between spheres.
arXiv:2306.10586. doi:10.48550/ARXIV.2306.10586.
2. Dustin G. Mixon, Daniel Packer. 2022.
Max Filtering with Reflection Groups.
arXiv:2212.05104. doi:10.48550/ARXIV.2212.05104.
3. Jameson Cahill, Joseph W. Iverson, Dustin G. Mixon, Daniel Packer. 2022.
Group-invariant max filtering.
arXiv:2205.14039. doi:10.48550/ARXIV.2205.14039.

Refereed Conference Articles

4. Daniel Packer, Sophia White, Aaron Williams. 2018.
A Paper on Pencils: A Pencil and Paper Puzzle Pencils is NP-Complete.
https://www.researchgate.net/publication/334806563_A_Paper_on_Pencils_A_Pencil_and_Paper_Puzzle_Pencils_is_NP-Complete

Undergraduate Original Research Thesis

5. Daniel Packer. 2018.
Prime-Generating Polynomials: Quadratics over norm-Euclidean Domains.
<https://digitalcommons.bard.edu/sr-theses/1240/>

Teaching Experience

Mathematics for Elementary School Teachers	Fall 2022
Teaching Assistant	
Calculus for Business	Fall 2021
Teaching Assistant	
College Algebra	Summer 2021
Teaching Assistant	
Calculus II	Spring 2021
Teaching Assistant	
Calculus for Biologists	Fall 2020
Teaching Assistant	

Other Experience

Nationwide, Columbus, Ohio

Data Science Intern,

MinedXAI, Dayton, Ohio

Graduate Summer Intern,

Pennsylvania State Applied Research Laboratory, University Park, Pennsylvania

Competition Winner,

January 2023 - Present

AI and ML Model Risk Management

Summer 2023

Topological Data Analysis

May 2021 - October 2021

Algorithms for Threat Detection