ANANYA UPPAL

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EDUCATION

Carnegie Mellon University — 2021 (expected)
Ph.D., Algorithms, Combinatorics and Optimization — G.P.A. 3.83/4.00

University of Illinois at Urbana-Champaign (UIUC) — May 2015
Bachelor of Science, Computer Science and Mathematics — G.P.A. 3.88/4.00

PUBLICATIONS & PREPRINTS

Robust Density Estimation under Besov IPMs — December 2020
Ananya Uppal, Shashank Singh, Barnabas Poczos
Advances in Neural Information Processing Systems 2020: ***Spotlight***
Acceptance Rate: 2.96%

Nonparametric Density Estimation and Convergence of GANs under Besov IPM Losses — December 2019
Ananya Uppal, Shashank Singh, Barnabas Poczos
Advances in Neural Information Processing Systems 2019: ***Oral***
Acceptance Rate: 0.053%
Outstanding Paper Award Honorable Mention: 3 of 6743 Submissions

Nonparametric Density Estimation under Adversarial Losses — December 2018
Shashank Singh, Ananya Uppal, Boyue Li, Chun-Liang Li, Manzil Zaheer, Barnabas Poczos
Advances in Neural Information Processing Systems 2018
Acceptance Rate: 20.8%

Spacing Distribution of a Bernoulli Sampled Sequence — October 2015
Abigail L. Turner, Ananya Uppal, Peng Xu
ArXiv preprint arXiv:1510.03500

EXPERIENCE

Reviewer for Journals

Annals of Statistics — 2020
Journal of Machine Learning Reserach — 2020
IEEE Transactions on Information Theory — 2019

Reviewer for Conferences

Advances in Neural Information Processing Systems (NeurIPS) — 2018-2020
International Conference on Machine Learning (ICML) — 2020
International Conference on Learning Representations (ICLR) — 2020

Undergraduate Summer Research Project Mentor — Summer 2019
Mentored undergraduate reserach project on tracking bond indices.
Principal Financial Group

Graduate Teaching Assistant
Carnegie Mellon University

Courses in Masters of Computational Finance Program — Spring 2019-present
Linear Programming — Spring 2018, Fall 2018
Operations Research — Fall 2016 - Fall 2017
Matrix Algebra — Fall 2015, Spring 2016

Lead NetMath Mentor (UIUC) — Spring 2014, Fall 2014
Help manage administrative duties such as training new mentors, helping improve the experience of students taking courses at NetMath.

PROJECTS

Survey of Distribution Regression Methods Spring 2018
Statistical Machine Learning Course Project, Prof. Larry Wasserman
- Studied and summarized the state of the art algorithms for distribution regression.

Research on Random Discrete Sets Fall 2013, Spring 2014, Fall 2014
Illinois Geometry Lab (UIUC)
- Observed that gap distributions in subsets obtained by sampling the Farey sequence with Bernoulli trials are exponential and verified similar results, both numerically and theoretically, for other equi-distributed sequences.

Research on Outer Billiards in Hyperbolic Plane Summer 2013
Institute for Computational and Experimental Research in Mathematics - Brown University
- Visualized periodicity of points around a convex polygonal table in hyperbolic plane under the outer billiards map and studied the behavior of these orbits.

Research on applications of n-dimensional integrals Fall 2012, Spring 2013
- Studied volume of intersections of n-D cylingers and the generalizations of the "broken stick" problem.

Presented reserach on n-dimensional integrals at various conferences
- MAA MathFest August 2013
- Young Mathematicians Conference August 2013
  Ohio State University, Columbus, OH
- Undergraduate Topology and Geometry Conference February 2013
  University of Texas at Austin, Austin, Texas
- Undergraduate Research Symposium April 2013
  University of Illinois at Urbana-Champaign, Urbana, Illinois
- Public Engagement Symposium February 2013

RELEVENT COURSEWORK

Machine Learning	**Mathematics**	**Algorithms**
Intermediate Statistics	Differential Geometry	Graduate Algorithms
Statistical Machine Learning	Convex Optimization	Integer Programming

TECHNICAL SKILLS

Programming skills: Java, C, C++, Python, OCaml
Software and Libraries: Mathematica, LaTeX, PyTorch

HONORS & AWARDS

NeurIPS 2019 Honorable Mention for Outstanding Paper Award 2019
Most Outstanding Major Award in Mathematics and Computer Science 2015
Edmund J. James Scholar at UIUC 2011 - 2014
Dean's List Fall 2011, Spring 2012