ANANYA UPPAL

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EMPLOYMENT

Postdoctoral Research Fellow — January 2021 - May 2022
Simon's Institute for the Theory of Computing
University of California, Berkeley

Postdoctoral Fellow — July 2021 - January 2022
Institute for the Foundations of Machine Learning (IFML)
University of Texas, Austin

EDUCATION

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

B.S., Algorithms, Combinatorics and Optimization — December 2019
Carnegie Mellon University — G.P.A. 3.83/4.00

Bachelor of Science, Computer Science and Mathematics — May 2015
University of Illinois at Urbana-Champaign (UIUC) — 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, 2022
Journal of Machine Learning Research — 2020, 2021
IEEE Transactions on Information Theory — 2019

Reviewer for Conferences

Advances in Neural Information Processing Systems (NeurIPS) — 2018-2021
International Conference on Machine Learning (ICML) — 2020, 2022
International Conference on Learning Representations (ICLR) — 2020

Undergraduate Summer Research Project Mentor — Summer 2019
Mentored undergraduate research 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 cylinders and the generalizations of the "broken stick" problem.

Presented research 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