Abhratanu Dutta

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Education

- **Northwestern University(ongoing)** — Chicago, USA
  PhD Candidate — *2015 - Present*
- **Chennai Mathematical Institute** — Chennai, India
  BSc — *2012 - 2015*

Work Experience

- Graduate Research Assistant, Northwestern University

- Teaching Assistant : Fall 2015 : Theory of Computation, Fall 2016, 2017, 2018 : Discrete Mathematics

- Research Intern : Microsoft Research India Summer 2014

- Research Intern : IIT Kharagpur Summer 2013

Coding Experience

- Languages : Python, C++

- Implemented novel algorithm for clustering and testing stability on popular datasets, as part of the "Clustering Stable Instances of Euclidean k-Means" paper with Aravindan Vijayaraghavan and Alex Wang (NIPS 2017)

- First in Mid-Central Regional 2016 ACM International Collegiate Programming Contest (**ICPC**). Participated in the ICPC World Finals 2017.

- Selected to be a part of International Olympiad in Informatics (**IOI**) Training Camp 2011, 2012 in India. Represented India in the International Olympiad in Informatics 2011.

Publications

- Computational Cost of Achieving Adversarial Robustness for PTFs, with Pranjal Awasthi and Aravindan Vijayaraghavan, Submitted to Conference on Learning Theory (**COLT**) 2019

- Provable guarantees for Maximum Likelihood Estimation for Mixture models, with Aravindan Vijayaraghavan, Working Paper

- Clustering Stable Instances of Euclidean k-Means, with Aravindan Vijayaraghavan and Alex Wang, Neural Information Processing Systems (**NIPS**) 2017

Projects

- Organized Theory of Deep Learning reading group at Northwestern, Fall 2018

- Data Science and Online Markets : Northwestern University, Spring 2018

Academic Awards & Honours

Morrison Fellowship, by Northwestern University 2019
Best Teaching Assistant, EECS, Northwestern University 2017-2018
ACM ICPC World Finals 2017
International Olympiad in Informatics (IOI) 2011
Indian National Mathematical Olympiad (INMO) 7th in country 2011

Community Service

- Reviewer at ICML 2019, COLT 2019, ICML 2018, APPROX 2018, NIPS 2017

References

- Aravindan Vijayaraghavan, Assistant Professor, Northwestern University

- Anindya De, Assistant Professor, University of Pennsylvania

Additional references available on request