

Prathamesh Dharangutte

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RESEARCH INTERESTS

- I am primarily interested in **algorithms for big data analysis**, more broadly in **differential privacy**, **numerical linear algebra** and **machine learning**.

EDUCATION

- **PhD in Computer Science**

Rutgers University

Advisor: Jie Gao

Sept 2021 – Present

- **MS in Computer Science**

New York University

Thesis: Dynamic Trace Estimation.

Advisor: Christopher Musco

Aug 2019 – May 2021

- **B.E. in Computer Engineering**

Pune University

July 2013 – May 2017

PUBLICATIONS

*Authors appear in alphabetical order. Exceptions are marked by *.*

Conference papers

- **Hardness and Approximation Algorithms for Balanced Districting Problems**
Prathamesh Dharangutte, Jie Gao, Shang-En Huang, Fang-Yi Yu
Foundations of Responsible Computing
(FORC 2025).
- **Fully Dynamic Adversarially Robust Correlation Clustering in Polylogarithmic Update Time**
Vladimir Braverman, Prathamesh Dharangutte, Shreyas Pai, Vihan Shah, Chen Wang
Conference on Artificial Intelligence and Statistics
(AISTATS 2025).
- **Differentially Private Range Queries with Correlated Input Perturbation**
Prathamesh Dharangutte, Jie Gao, Ruobin Gong, Guanyang Wang
Conference on Artificial Intelligence and Statistics
(AISTATS 2025).
- **Learning-augmented Maximum Independent Set**
Vladimir Braverman, Prathamesh Dharangutte, Vihan Shah, Chen Wang
International Conference on Approximation Algorithms for Combinatorial Optimization Problems
(APPROX 2024).
- **Metric Clustering and MST with Strong and Weak Distance Oracles**
MohammadHossein Bateni, Prathamesh Dharangutte, Rajesh Jayaram, Chen Wang
Conference on Learning Theory (COLT 2024).
- **Integer Subspace Differential Privacy**
Prathamesh Dharangutte, Jie Gao, Ruobin Gong, Fang-Yi Yu
AAAI Conference on Artificial Intelligence (AAAI 2023).
- **A Tight Analysis of Hutchinson's Diagonal Estimator**
Prathamesh Dharangutte, Christopher Musco
SIAM Symposium on Simplicity in Algorithms (SOSA 2023).

- **Dynamic Trace Estimation**

Prathamesh Dharangutte, Christopher Musco
Conference on Neural Information Processing Systems (NeurIPS) 2021.

- **Graph Learning for Inverse Landscape Genetics**

Prathamesh Dharangutte, Christopher Musco
AAAI Conference on Artificial Intelligence (AAAI) 2021.

Workshop papers

- **HeartInsightify: Interpreting Longitudinal Heart Rate Data for Health Insights through Conformal Clustering***

Prathamesh Dharangutte, Zongxing Xie, Jie Gao, Elinor Schoenfeld, Yindong Hua, and Fan Ye
13th International Workshop on Biomedical and Health Informatics (BHI 2023)

- **An Energy-Based View of Graph Neural Networks***

John Y. Shin, Prathamesh Dharangutte
Energy-Based Models Workshop (EBM-ICLR) 2021.

TEACHING EXPERIENCE

Grader, Design and Analysis of Data Structures and Algorithms II (Rutgers CS514)	<i>Fall 2024</i>
TA, Introduction to Discrete Structures I (Rutgers CS205)	<i>Spring 2023</i>
TA, Machine Learning Principles (Rutgers CS461)	<i>Fall 2022</i>
TA, Data Management for Data Science (Rutgers CS210)	<i>Spring 2022</i>
TA, Mathematical Foundations of Data Science (Rutgers CS501)	<i>Fall 2021</i>
TA, Introduction to Machine Learning (NYU CS-UY 4563)	<i>Spring 2020</i>

PROFESSIONAL EXPERIENCE

Decompute Inc. <i>AI Researcher (Intern)</i>	Sept 2024 – Dec 2024
HSBC Software Development <i>Software Engineer</i>	Aug 2017 – Nov 2018 <i>Pune, India</i>

SERVICE & AWARDS

Reviewer: AAAI'25, ICML'24, NeurIPS'23, AISTATS'23.
Sub-reviewer: SOSA'25, ESA'24 (Track S), RANDOM'24.
Conference travel awards: COLT'24, AAAI'23, AAAI'21.

Technical skills

Programming languages: (Proficient) Python; (Familiar) C++, Java, Matlab.
Applications and tools: Pytorch, Latex, git, bash scripting.