

# Prathamesh Dharangutte

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## RESEARCH INTERESTS

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

## EDUCATION

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- **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

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

### Working papers

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- **Metric Clustering and MST with Strong and Weak Distance Oracles**  
MohammadHossein Bateni, Prathamesh Dharangutte, Rajesh Jayaram, Chen Wang  
Preprint.

### Conference papers

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- **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 paper

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- **An Energy-Based View of Graph Neural Networks**  
John Y. Shin\*, Prathamesh Dharangutte\*  
Energy-Based Models Workshop (EBM-ICLR) 2021.

## TEACHING EXPERIENCE

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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

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<b>HSBC Software Development</b> <i>Software Engineer</i>	Aug 2017 – Nov 2018 <i>Pune, India</i>
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## SERVICE & AWARDS

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**Reviewer:** AISTATS'23, NeurIPS'23.  
**Conference travel awards:** AAAI'23, AAAI'21.

## Technical skills

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