Yash Pote

Ph.D. Candidate
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EDUCATION

Postdoc	School of Computing, National University of Singapore, 2025-
Ph.D.	School of Computing, National University of Singapore, 2019-
B.Tech.	Computer Science and Engineering, IIT - Guwahati, 2014-2018

RESEARCH INTEREST

My research interests are distribution testing and formal methods. Specifically, I want to explore and apply the theory of distribution testing to build faster verification tools for real-world distributions, such as samplers and generative models. More generally, I am interested in the use of formal methods (like combinatorial solving) in machine learning.

PUBLICATIONS

Distribution Testing

2025 "Distribution Testing in the Real World: Application to Plagiarism Detection in Large Language Models", *Under Submission*
Clément L. Canonne, Yash Pote, and Uddalok Sarkar

2025 "Distance Estimation for High-Dimensional Discrete Distributions", *Under Submission* (Paper).
Gunjan Kumar, Kuldeep S. Meel, and Yash Pote.

2024 "Testing Self-Reducible Samplers", *AAAI*
Rishiraj Bhattacharya, Sourav Chakraborty, Yash Pote, Uddalok Sarkar, and Sayantan Sen.

2022 "On Scalable Testing of Samplers", *NeurIPS* (Paper, Code).
Yash Pote and Kuldeep S. Meel

2021 "Testing Probabilistic Circuits", *NeurIPS* (Paper, Code).
Yash Pote and Kuldeep S. Meel

2020 "On Testing of Samplers", *NeurIPS*. (Paper, Code).
Kuldeep S. Meel, Yash Pote, and Sourav Chakraborty

Solving Combinatorial Problems

2025 "Towards Real-Time Approximate Counting", *AAAI*
Yash Pote, Kuldeep S. Meel, and Jiong Yang

2021 "Partition Function Estimation: A Quantitative Study", *IJCAI (Survey)*.
(Paper, Slides, Data)
Durgesh Agrawal, Yash Pote, and Kuldeep S. Meel

2019 "Phase Transition Behavior of Cardinality and XOR Constraints", *IJCAI*.
(Paper, Slides, Code).
Yash Pote, Saurabh Joshi, and Kuldeep S. Meel

DNA Data Storage

2023 "Efficiently Supporting Hierarchy and Data Updates in DNA Storage", *MICRO* (Paper).
Puru Sharma, Cheng-Kai Lim, Dehui Lin, Yash Pote, and Djordje Jevdjic.

2022 "Managing Reliability Bias in DNA Storage", *ISCA* (Paper).
Dehui Lin, Yasamin Tabatabaee, Yash Pote, Djordje Jevdjic

TEACHING EXPERIENCE

National University of Singapore

CS 4244: Knowledge Representation and Reasoning (Teaching Assistant-Spring 2019, 20, 23)

CS 4269/CS 5469: Fundamentals of Logic in Computer Science (Teaching Assistant-Winter 2019)

CS 4218: Software Testing (Lab Tutor-Spring 2021)

PROFESSIONAL EXPERIENCE

2022 Amazon AWS, Applied Science Intern in the Automated Reasoning Group
Cupertino, California, USA;

2017 Goldman Sachs, Summer Intern in the Global Securities Team
Bangalore, India;

SERVICE

Conference Reviewer

AISTATS	2024
CAV	2023
ICLR	2023
ICML	2021, 22, 23, 24
NeurIPS	2021, 23, 24
PODS	2024

SELECTED TALK(S)

Towards Practical Distribution Testing (Video)(Slides)

2023 SACT talk, University of Sydney.

2024 A&C Seminar, University of Waterloo.

2024 Verification Seminar, Oxford University.

2024 Workshop on Local Algorithms, Sublinear Algorithm program, Simons Institute, Berkeley.

RESEARCH VISITS

2022 Participant at the SAT program at the Simon's Institute for the Theory of Computing.

2023 Hosted by Clément L. Canonne at the School of Computer Science at The University of Sydney.

2024 Attended WOLA at Sublinear Algorithms at Simon's.

2024 Hosted by Prof. Marta Z. Kwiatkowska at the University of Oxford

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