

Ritesh Noothigattu

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EDUCATION

- 2016 - 2020 Doctor of Philosophy in Machine Learning
2016 - 2019 Master of Science in Machine Learning
Carnegie Mellon University
QPA: 4.26/4.0
Advisor: Ariel D. Procaccia
- 2012 - 2016 Bachelor of Technology in Computer Science & Engineering
Indian Institute of Technology Delhi
CGPA: 9.894/10
Advisors: Mausam and Parag Singla

AWARDS & SCHOLASTIC DISTINCTIONS

- **2018-19 K&L Gates Presidential Fellowship:** Awarded to three Ph.D. students working in the area of Ethics & Computational Technologies.
- **Best B.Tech. Project Award:** Undergraduate thesis titled “On the Go Abstractions in UCT and Non-Count Symmetries in Prob. Graphical Models” won the award for being **the best B.Tech. Project in the Computer Science & Engineering department at IIT Delhi.**
- **Institute Rank:** Secured 3rd rank among all undergraduates at IIT Delhi, with a CGPA of 9.894/10.
- **IIT-JEE 2012:** Secured **All India Rank 10 (GE)** among 500,000 students.
- **AIEEE 2012:** Secured **All India Rank 7 (GE)** among a million students.

PUBLICATIONS & PATENTS

(α - β) marks alphabetical author ordering. And when authors are ordered by contribution, an asterisk marks equal contribution.

Conference Publications

- Ritesh Noothigattu*, Tom Yan*, Ariel D. Procaccia. *Inverse Reinforcement Learning From Like-Minded Teachers*. Proc. of the 35th AAAI Conference on Artificial Intelligence (AAAI-2021).
- (α - β) Ritesh Noothigattu, Dominik Peters, Ariel D. Procaccia. *Axioms for Learning from Pairwise Comparisons*. Proc. of the 34th Conference on Neural Information Processing Systems (NeurIPS-2020).
- (α - β) Maria-Florina Balcan, Travis Dick, Ritesh Noothigattu, Ariel D. Procaccia. *Envy-Free Classification*. Proc. of the 33rd Conference on Neural Information Processing Systems (NeurIPS-2019).
- Min Kyung Lee, Daniel Kusbit, Anson Kahng, Ji Tae Kim, Xinran Yuan, Allissa Chan, Ritesh Noothigattu, Daniel See, Siheon Lee, Christos-Alexandros Psomas, Ariel D. Procaccia. *WeBuildAI: Participatory Framework for Fair and Efficient Algorithmic Governance*. Proc. of the 22nd ACM Conference on Computer-Supported Cooperative Work and Social Computing (CSCW-2019).
- (α - β) Anson Kahng, Min Kyung Lee, Ritesh Noothigattu, Ariel D. Procaccia, Christos-Alexandros Psomas. *Statistical Foundations of Virtual Democracy*. Proc. of the 36th International Conference on Machine Learning (ICML-2019).

- Amulya Yadav*, Ritesh Noothigattu*, Eric Rice, Laura Onasch-Vera, Leandro S. Marcolino, Milind Tambe. *Please be an Influencer? Contingency-Aware Influence Maximization*. Proc. of the 17th International Conference on Autonomous Agents and Multiagent Systems (AAMAS-2018).
- Ritesh Noothigattu, Snehal Kumar S. Gaikwad, Edmond Awad, Sohan Dsouza, Iyad Rahwan, Pradeep Ravikumar, Ariel D. Procaccia. *A Voting-Based System for Ethical Decision Making*. Proc. of the 32nd AAAI Conference on Artificial Intelligence (AAAI-2018).
- (α - β) Nika Haghtalab, Ritesh Noothigattu, Ariel D. Procaccia. *Weighted Voting Via No-Regret Learning*. Proc. of the 32nd AAAI Conference on Artificial Intelligence (AAAI-2018).
- Ankit Anand*, Ritesh Noothigattu*, Parag Singla, Mausam. *Non-Count Symmetries in Boolean & Multi-Valued Prob. Graphical Models*. Proc. of the 20th International Conference on Artificial Intelligence and Statistics (AISTATS-2017).
- Ankit Anand*, Ritesh Noothigattu*, Mausam, Parag Singla. *OGA-UCT: On the Go Abstractions in UCT*. Proc. of the 26th International Conference on Automated Planning and Scheduling (ICAPS-2016).

Journal Publications

- Ritesh Noothigattu, Djallel Bouneffouf, Nicholas Mattei, Rachita Chandra, Piyush Madan, Kush Varshney, Murray Campbell, Moninder Singh, Francesca Rossi. *Teaching AI Agents Ethical Values Using Reinforcement Learning and Policy Orchestration*. IBM Journal of Research and Development, 2019.

Workshop Publications

- Ritesh Noothigattu, Nihar B. Shah, Ariel D. Procaccia. *Loss Functions, Axioms, and Peer Review*. Workshop on Incentives in Machine Learning at the 37th International Conference on Machine Learning (IML@ICML2020).

Patents

- Meghanath Macha, Ritesh Noothigattu, Shivam Garg, Abhishek Kandoi. *Buying Stage Determination in a Digital Medium Environment*. Adobe Systems, Issued January 2016.

WORK EXPERIENCE

JUN-AUG 2019	<p>Google, Mountain View <i>Software Engineering Intern, PhD</i></p> <p>The project was to formulate a new <i>notion of fairness that would be more suitable for YouTube ads</i>. To this end, we design an individual fairness distance metric, which is (i) practical, (ii) guarantees group fairness and (iii) has individual level semantics.</p>
MAY-AUG 2018	<p>IBM T.J. Watson Research Center, Yorktown Heights <i>Science for Social Good Fellow</i></p> <p>The project was to incorporate <i>morality into reinforcement learning</i> agents, while they try to maximize environment rewards. The approach used inverse reinforcement learning to learn morality, and reinforcement learning to learn to maximize environment rewards.</p>
MAY-JUL 2015	<p>Adobe Research Labs, Bengaluru <i>Research Intern</i></p> <p>The project was to <i>predict the stage of a customer</i> in the conversion funnel, on an e-commerce website, and the approach involved using Hidden Markov Models. A <i>patent</i> on this has been approved by Adobe.</p>

PROGRAMMING LANGUAGES

Python, C, C++, Java, MATLAB, R, SQL, OCaml, VHDL, Prolog, HTML, Javascript, PHP, LaTeX.