

Arun Sai Suggala

CONTACT INFORMATION

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RESEARCH INTERESTS

I'm broadly interested in online learning, game theory, and their applications to machine learning and statistics. I'm specifically interested in designing new algorithmic and analytic tools in game theory for solving statistical and machine learning problems.

EDUCATION

- **Carnegie Mellon University** *Aug 2016-May 2021(Expected)*
Ph.D. in Machine Learning
Advisor: **Prof. Pradeep Ravikumar**
- **Carnegie Mellon University** *May 2017*
M.S. in Machine Learning *GPA 4.15 (4.0 scale)*
- **Indian Institute of Technology Bombay** *May 2012*
B.Tech in Computer Science & Engineering *GPA 9.34 (10.0 scale)*

INDUSTRY EXPERIENCE

- **Research Intern at Microsoft Research, India** *Summer 2018*
- **Research Intern at Microsoft Research, India** *Summer 2016*
- **Software Developer at Microsoft, Redmond** *2012-2014*

SELECTED HONOURS AND AWARDS

- **Best student paper** award at International Conference on Algorithmic Learning Theory (**ALT**) 2020.
- Awarded CMU Machine Learning Department's **best teaching assistant** award in 2018.
- Secured All India **17th rank** in **IIT JEE** (2008) among over 375,000 students.
- Ranked **20th** in **ACM-ICPC Asia-Amrutapuri** Regional Programming Contest 2010.
- Awarded **Gold Medal** at the **Indian National Chemistry Olympiad (INChO)** held at Mumbai (for being among the top 35 candidates out of 30,000 candidates), India and got selected for IChO training camp.

TEACHING/ADVISING EXPERIENCE

- **Mentoring** masters and junior PhD students in CMU *2019-Present*
- **Teaching Assistant**, 10715 - Advanced Introduction to Machine Learning
Carnegie Mellon University *Fall 2017*
- **Teaching Assistant**, CS 311 - Discrete Mathematics
University of Texas at Austin *Spring 2015*

PREPRINTS

- Gupta, Kartik*, Arun Sai Suggala*, Adarsh Prasad, Praneeth Netrapalli, and Pradeep Ravikumar. “Learning Minimax Estimators via Online Learning.” Submitted to Annals of Stats. <https://arxiv.org/abs/2006.11430>.

SELECTED PUBLICATIONS

- Suggala, Arun, Bingbin Liu, and Pradeep Ravikumar. “Generalized Boosting.” Advances in Neural Information Processing Systems 33 (2020).
- Suggala, Arun, and Praneeth Netrapalli. “Follow the Perturbed Leader: Optimism and Fast Parallel Algorithms for Smooth Minimax Games.” Advances in Neural Information Processing Systems 33 (2020).
- Suggala, Arun Sai, and Praneeth Netrapalli. “Online non-convex learning: Following the perturbed leader is optimal.” In Algorithmic Learning Theory, pp. 845-861. 2020.
- Prasad, Adarsh, Arun Sai Suggala, Sivaraman Balakrishnan, and Pradeep Ravikumar. “Robust estimation via robust gradient estimation.” Journal of the Royal Statistical Society Series B 82, no. 3 (2020): 601-627.
- Suggala, Arun Sai, Kush Bhatia, Pradeep Ravikumar, and Prateek Jain. “Adaptive hard thresholding for near-optimal consistent robust regression.” Proceedings of the Thirty-Second Conference on Learning Theory, in PMLR 99:2892-2897.
- Suggala, Arun Sai, Adarsh Prasad, Vaishnavh Nagarajan, and Pradeep Ravikumar. “Revisiting adversarial risk.” In The 22nd International Conference on Artificial Intelligence and Statistics, pp. 2331-2339. 2019.
- Suggala, Arun, Adarsh Prasad, and Pradeep K. Ravikumar. “Connecting optimization and regularization paths.” In Advances in Neural Information Processing Systems, pp. 10608-10619. 2018.
- Gupta, Chirag*, Arun Sai Suggala*, Ankit Goyal, Harsha Vardhan Simhadri, Bhargavi Paranjape, Ashish Kumar, Saurabh Goyal, Raghavendra Udupa, Manik Varma, and Prateek Jain. “Protonn: Compressed and accurate knn for resource-scarce devices.” In International Conference on Machine Learning, pp. 1331-1340. 2017.

KEY COURSES

- Advanced Introduction to Machine Learning, Scalable Machine Learning, Statistical Machine Learning, Advanced Statistical Theory.
- Convex Optimization, Game Theory, Randomized Algorithms.

TECHNICAL SKILLS

Programming: C++, Python
Packages: MATLAB