Aravind Gollakota

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Education

2017–2023 University of Texas at Austin, Austin, TX
PhD in Computer Science. Advisor: Adam Klivans.

2013–2017 Cornell University, Ithaca, NY
BA in Mathematics, BA in Computer Science.

Fall 2016 Budapest Semesters in Mathematics, Budapest, Hungary

Research interests

Computational and statistical learning theory, foundations of deep learning, and related topics

Publications

(Authors usually in alphabetical order)

2023 Aravind Gollakota, Parikshit Gopalan, Adam Klivans, and Konstantinos Stavropoulos. *Agnostically Learning Single-Index Models using Omnipredictors.* Submitted, 2023.

2023 Giannis Daras, Kulin Shah, Yuval Dagan, Aravind Gollakota, Alexandros Dimakis, and Adam Klivans. *Ambient Diffusion: Learning Clean Distributions from Corrupted Data.* Submitted, 2023.

2023 Aravind Gollakota, Adam Klivans, Konstantinos Stavropoulos, and Arsen Vasilyan. *Tester-Learners for Halfspaces: Universal Algorithms.* Submitted, 2023.

2023 Aravind Gollakota, Adam Klivans, Konstantinos Stavropoulos, and Arsen Vasilyan. *An Efficient Tester-Learner for Halfspaces.* Submitted, 2023.

2023 Aravind Gollakota, Adam Klivans, and Pravesh Kothari. *A Moment-Matching Approach to Testable Learning and a New Characterization of Rademacher Complexity.* Symposium on Theory of Computing (STOC) 2023.

2022 Sitan Chen, Aravind Gollakota, Adam Klivans and Raghu Meka. *Hardness of Noise-Free Learning for Two-Hidden-Layer Neural Networks.* Neural Information Processing Systems (NeurIPS) 2022 (Oral presentation).

2022 Aravind Gollakota and Daniel Liang. *On the Hardness of PAC-learning Stabilizer States with Noise.* Quantum 6, 2022.

2020 Aravind Gollakota, Sushrut Karmalkar, and Adam Klivans. *The Polynomial Method is Universal for Distribution-Free Correlational SQ Learning.* Technical note, 2020.

2020 Surbhi Goel, Aravind Gollakota, and Adam Klivans. *Statistical-Query Lower Bounds via Functional Gradients.* Neural Information Processing Systems (NeurIPS) 2020.

2020 Surbhi Goel, Aravind Gollakota, Zhihan Jin, Sushrut Karmalkar, and Adam Klivans. *Superpolynomial Lower Bounds for Learning One-Layer Neural Networks using Gradient Descent.* International Conference on Machine Learning (ICML) 2020.

2020 Aravind Gollakota, Will Hardt and István Miklós. *Packing Tree Degree Sequences.* Graphs and Combinatorics 36, 2020.

Work experience

2021 Susquehanna International Group (SIG), Bala Cynwyd, PA — Quantitative Strategy Intern
- Worked on the equity options trading desk

2019 Google, Cambridge, MA — Software Engineering Intern
- Worked on a confidential project within the Cloud division, writing low-level software in Rust

2017 Toyota Technological Institute at Chicago (TTIC), Chicago, IL — Research Intern
- Worked with Julia Chuzhoy and Madhur Tulsiani on approximation algorithms for graph problems

2016 Google, Mountain View, CA — Software Engineering Intern
- Worked on extending a new type system implementation for the Closure Compiler for JavaScript

2015 Google, San Francisco, CA — Software Engineering Intern
- Worked on a backend data migration project on a Cloud Platform team

Teaching

2020 TA, CS 391L Machine Learning (online master's course)
2019 TA, CS 311 Discrete Mathematics for Computer Science (undergraduate course)

Reviewing

ICML, NeurIPS (Outstanding Reviewer Award in 2021)

Honors

2017 Provost's Graduate Excellence Fellowship 2017–2021, UT Austin
2016 Putnam Mathematical Competition 2016: ranked in the top 350

Other

Nationality: Indian