Anav **Sood**

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Education History

PhD in Statistics at Stanford University (advised by Prof. Trevor Hastie), Intended Graduation in June 2025, GPA: 4.167/4.0
MS in Statistics at Stanford University, Graduated in June 2020, GPA: 4.055/4.0
BS in Mathematics at Stanford University, Graduated in June 2020, GPA: 4.051/4.0

Professional Experience

Data Science Intern at Wayve (2022): Developed a framework and methodology measuring correlation between vehicle performance in real world and simulation. Developed new A/B tests for comparing different vehicles' real world performance that are currently in use.

Quantitative Research Intern at Citadel (2019): Evaluated modern feature selection methods in settings with high dimensional economic time series data. Ran event studies to determine if bond rating changes were significant indicators of stock price movement.

Software Engineering Intern at Cruise Automation (2018): Invented patented algorithm for the naively NP-complete problem of identifying the subset of k avoidance areas which most negatively impact routability on a routable map.

Data Science/Machine Learning Consultant (2020-Pres): Clients include Sequoia Captial (worked on automating talent search), Custumor Value Fund at General Catalyst (worked on quantifying uncertainty surrounding consumer churn), Coframe (worked on strategies for comparing and evaluating LLM agents), and Snorkel (worked on developing math problems that stumped LLMs).

Teaching

Instructor for STATS 216V: Introduction to Statistical Learning (Summer 2023)
Instructor for STATS 208: Bootstrap, Cross-validation, and Sample Re-use (Winter 2022)
Instructor for STATS 110: Statistical Methods for Enginnering and Sciences (Fall 2021)
TA for STATS 305C (Spring 2024), STATS 315B (Spring 2022), STATS 216V (Summer 2024), STATS 207 (Fall 2020), STATS 116 (Fall 2023), STATS 117 (Spring 2025), and STATS 100 (Spring 2021)

Natural Language Processing: Course Assistant/Developer at SCPD (2019-2020): Member of teaching staff for XCS224N: NLP with Deep Learning. Designed and built all course assignments on transformers and double descent.

Mentor at Polygence (current): Mentor for advanced high school students working on ML/statistics problems.

Research

Sood, A. and Hastie, T. A Statistical View of Column Subset Selection. *Accepted at the Journal of the Royal Statistical Society: Series B.* (2025+)

Sood, A. Selective inference is easier with p-values. *Submitted to the Annals of Statistics.* (2024)

Sood, A. Powerful rank verification for multivariate Gaussian data with any covariance structure. *Preprint available.* (2025)

Mayer, A. T.*, Holman, D. R.*, Sood, A.* et al. Tissue atlas of ulcerative colitis revealing evidence of sex-dependent differences in disease-driving inflammatory cell types and resistance to TNF inhibitor therapy. *Science Advances.* (2023)

Sood, A., Swofford, M., Rech, L. O. M., and Bowe, A. Analysis of network effects of avoidance areas on routing. U.S. Patent 10,962,380, filed December 20, 2018, and issued March 30, 2021

Sun, D., Kim G., and Sood, A. The Art of Chance: A Beginner's Guide to Probability. *Preprint available.* (2024)

Bates, E.*, Morrison, B.*, Rogers, M.*, Serafini, A.*, and Sood, A.* A new combinatorial interpretation of sums of m-step Fibonacci numbers. *Preprint available.* (2025)