

UNIQUE SUBEDI

subedi@umich.edu

EDUCATION

- 2021–2026 Ph.D. in Statistics, University of Michigan–Ann Arbor
Interests: Machine Learning, AI for Scientific Applications
Thesis Advisor: Dr. Ambuj Tewari
- 2021–2025 M.A in Statistics, University of Michigan–Ann Arbor
- 2017–2021 BS in Mathematics & Computer Science, University of Mississippi
Thesis: A Weighted Version of Erdős-Kac Theorem

PROFESSIONAL EXPERIENCE

- 09/2024–present Graduate Research Assistant, University of Michigan
- 05/2025–08/2025 AI Research Intern, Block Inc. (parent company of Square & CashApp)
- 6/2020–9/2020 Research Intern, Fields Institute for Research in Mathematical Sciences

PAPERS

(α - β) indicates the alphabetical ordering of the author list. (*) indicates equal contribution.

PUBLICATIONS.

- (1) Unique Subedi and Ambuj Tewari. Operator learning: A statistical perspective. *Annual Review of Statistics and Its Applications*, 2026.
- (2) Seamus Somerstep, Vinod Raman, Unique Subedi, and Yuekai Sun. Learning to choose or choosing to learn: Best-of-n vs. supervised fine-tuning for bit string generation. *Conference on Artificial Intelligence and Statistics*, 2026.
- (3) Unique Subedi and Ambuj Tewari. Controlling statistical, discretization, and truncation errors in learning fourier linear operators. *Transactions on Machine Learning Research (TMLR)*, 2025.
- (4) Unique Subedi and Ambuj Tewari. On the benefits of active data collection in operator learning. *International Conference on Machine Learning (ICML)*, 2025 (Spotlight).
- (5) Vinod Raman*, Unique Subedi*, and Ambuj Tewari. The complexity of sequential prediction in dynamical systems. *Learning for Dynamics and Control (L4DC)*, 2025 (Oral).

- (6) Vinod Raman*, Unique Subedi*, and Ambuj Tewari. A unified theory of supervised online learnability. In *Conference on Algorithmic Learning Theory (ALT)*, 2025 (**Outstanding Paper Award**).
- (7) Vinod Raman*, Unique Subedi*, and Ambuj Tewari. A characterization of multioutput learnability. *Journal of Machine Learning Research (JMLR)*, 2024.
- (8) Vinod Raman*, Unique Subedi*, and Ambuj Tewari. Smoothed online classification can be harder than batch classification. *Conference on Neural Information Processing Systems (NeurIPS)*, 2024.
- (9) (α - β) Steve Hanneke, Vinod Raman, Amirreza Shaeiri, and Unique Subedi. Multiclass transductive online learning. *Conference on Neural Information Processing Systems (NeurIPS)*, 2024 (**Spotlight**).
- (10) Vinod Raman*, Unique Subedi*, and Ambuj Tewari. Online learning with set-valued feedback. *Conference on Learning Theory (COLT)*, 2024.
- (11) Vinod Raman*, Unique Subedi*, Ananth Raman, and Ambuj Tewari. Apple tasting: Combinatorial dimensions and minimax rates. *Conference on Learning Theory (COLT)*, 2024.
- (12) Vinod Raman*, Unique Subedi*, and Ambuj Tewari. Online infinite-dimensional regression: Learning linear operators. *Conference on Algorithmic Learning Theory (ALT)*, 2024.
- (13) Ananth Raman, Vinod Raman*, Unique Subedi*, Idan Mehalal*, and Ambuj Tewari. Multiclass online learnability under bandit feedback. *Conference on Algorithmic Learning Theory (ALT)*, 2024.
- (14) Vinod Raman*, Unique Subedi*, and Ambuj Tewari. On the learnability of multilabel ranking. *Conference on Neural Information Processing Systems (NeurIPS)*, 2023 (**Spotlight**).
- (15) Vinod Raman*, Unique Subedi*, and Ambuj Tewari. On proper learnability between average- and worst-case robustness. *Conference on Neural Information Processing Systems (NeurIPS)*, 2023.
- (16) (α - β) Steve Hanneke, Shay Moran, Vinod Raman, Unique Subedi, and Ambuj Tewari. Multiclass online learning and uniform convergence. *Conference on Learning Theory*, 2023.
- (17) (α - β) Daksh Aggarwal, Unique Subedi, William Verreault, Asif Zaman, and Chenghui Zheng. A conjectural asymptotic formula for multiplicative chaos in number theory. *Research in Number Theory*, 2022.
- (18) (α - β) Daksh Aggarwal, Unique Subedi, William Verreault, Asif Zaman, and Chenghui Zheng. Sums of random multiplicative functions over function fields with few irreducible factors. *Mathematical Proceedings of the Cambridge Philosophical Society*, 2022.

- (19) (α - β) Rizwanur Khan, Micah B. Milinovich, and Unique Subedi. A weighted version of the Erdős–Kac theorem. *Journal of Number Theory*, 2022.

PREPRINTS.

- (1) Yash Patel*, Unique Subedi*, and Ambuj Tewari. Operator learning for schrödinger equation: Unitarity, error bounds, and time generalization. *arXiv:2505.18288*, 2025.

AWARDS AND HONORS

- (2025) Rackham Predoctoral Fellowship, University of Michigan
- (2024) MSSISS Best Oral Presentation
- (2023) Rackham International Student Fellowship, University of Michigan
- (2023) Outstanding Statistics GSI Team (honorable mention), University of Michigan
- (2021) Rackham Fellowship, University of Michigan
- (2021) Taylor Memorial Medal, Highest academic honor at University of Mississippi
- (2021) Hume Award for outstanding senior in mathematics, University of Mississippi
- (2021) Ventress Scholar (awarded for perfect GPA), University of Mississippi
- (2019) Quarles Scholarship for outstanding sophomore in mathematics, University of Mississippi
- (2017) Academic Merit Scholarship (full tuition award), University of Mississippi

TEACHING

Graduate Student Instructor, University of Michigan

- (Fall 2023) Probability and Distribution Theory
- (Winter 2023) Statistics and Artificial Intelligence (aka Deep Learning)
- (Fall 2022) Bayesian Data Analysis
- (Winter 2022) Applied Regression Analysis
- (Fall 2021, Winter 2023) Introduction to Statistics and Data Analysis

TALKS

- Operator Learning for Schrödinger Equation: Unitarity, Error Bounds, and Time Generalization (Los Alamos National Laboratory-U of Michigan Workshop, 2025)
- Operator Learning for Schrödinger Equation: Unitarity, Error Bounds, and Time Generalization (MIDAS AI Workshop, 2025)
- Online Learning with Set-Valued Feedback (COLT 2024)
- Online Infinite-Dimensional Regression: Learning Linear Operators (MSSISS, 2024)
- Online Infinite-Dimensional Regression: Learning Linear Operators (ALT 2024)
- Online Learning with Set-Valued Feedback (SPEECS Seminar, U Michigan)
- A Weighted Version of Erdos-Kac Theorem (Number Theory Seminar, U Mississippi)
- Computational Investigations of Random Multiplicative Functions (Fields Institute)

TECHNICAL SKILLS

- **Programming:** Python, R, C++
- **Frameworks:** Pytorch, Tensorflow

PROFESSIONAL SERVICE

- **Reviewing:** NeurIPS (2023, 2024, 2025), ICML (2024, 2025), ICLR (2025), Statistical Science (2025)

REFERENCES

- Ambuj Tewari, Professor of Statistics, University of Michigan (tewaria@umich.edu)
- Yuekai Sun, Associate Professor of Statistics, University of Michigan (yuekai@umich.edu)
- Micah Milinovich, Professor of Mathematics, University of Mississippi (mbmilino@olemiss.edu)