

Hien Dang

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Department of Statistics and Data Science, The University of Texas at Austin

EDUCATION

University of Texas at Austin

2024 – Present

Ph.D. in Statistics, Aug 2024 – May 2029 (expected)

- Advisors: [Alessandro Rinaldo](#) and [Pratik Patil](#)
- GPA: 4.0/4.0

University of Science - Ho Chi Minh City, Vietnam

2016 – 2020

Bachelor of Science in Mathematics, Honors Program

RESEARCH INTERESTS

- High-dimensional statistics, statistical machine learning, random matrix theory, spectral algorithms, cross-validation and tuning.
- Statistical foundation for knowledge distillation and learning with model-generated data, neural scaling laws and phenomena in deep learning (e.g., neural collapse, posterior collapse).

PREPRINTS AND ONGOING WORK

1. **Hien Dang**, Pratik Patil, Alessandro Rinaldo. “Minimax and Spectral Instance Optimality under Perturbed Power-Law Covariance”, *Work in progress, arXiv preprint expected early Nov 2026*.
2. Long Tung Vuong, Vy Vo, **Hien Dang**, Van-Anh Nguyen, Thanh-Toan Do, Mehrtash Harandi, Trung Le, Dinh Phung. “Why Domain Generalization Fails? A View of Necessity and Sufficiency”. *arXiv preprint (2025)*. [arXiv](#)

PUBLICATIONS

(*) denotes equal contribution

1. **Hien Dang**, Pratik Patil, Alessandro Rinaldo. “Prediction-Only Distillation in Linear and Logistic Regression”. *Conference on Neural Information Processing Systems (NeurIPS), 2026*. [arXiv](#)
2. **Hien Dang**, Pratik Patil, Alessandro Rinaldo. “Optimal Unconstrained Self-Distillation in Ridge Regression: Strict Improvements, Precise Asymptotics, and One-Shot Tuning”, *International Conference on Machine Learning (ICML), 2026*. [arXiv](#)
3. Long Tung Vuong, Julien Monteil, **Hien Dang**, Volodymyr Vaskovych, Trung Le, Vu Nguyen. “On the Mechanisms of Collaborative Learning in VAE Recommenders”, *International Conference on Learning Representations (ICLR), 2026*. [arXiv](#)
4. **Hien Dang**, Tho Tran, Tan Nguyen, Nhat Ho. “Neural Collapse for Cross-entropy Class-Imbalanced Learning with Unconstrained ReLU Features Model”, *International Conference on Machine Learning (ICML), 2024*. [arXiv](#)
5. **Hien Dang**, Tho Tran, Tan Nguyen, Nhat Ho. “Beyond Vanilla Variational Autoencoders: Detecting Posterior Collapse in Conditional and Hierarchical Variational Autoencoders”, *International Conference on Learning Representations (ICLR), 2024*. [arXiv](#)
6. **Hien Dang***, Tho Tran*, Stanley Osher, Hung Tran-The, Nhat Ho, Tan Nguyen. “Neural Collapse in Deep Linear Networks: From Balanced to Imbalanced Data”, *International Conference on Machine Learning (ICML), 2023*. [arXiv](#)

SERVICES

- **Journal Reviewer:** Annals of Statistics (AoS); SIAM Journal on Mathematics of Data Science (SIMODS).
- **Conference Reviewer:** International Conference on Machine Learning (ICML); Conference on Neural Information Processing Systems (NeurIPS), International Conference on Learning Representations (ICLR); International Conference on Artificial Intelligence and Statistics (AISTATS).

TEACHING EXPERIENCE

Teaching Assistant, UT Austin

- SDS 336: Practical Machine Learning (undergraduate) Fall 2026
- SDS 322E: Elements of Data Science (undergraduate) Spring 2026
- SDS 391P.3: Theory of the Linear Model (graduate) Fall 2025
- SDS 391P.1: Advanced Statistical Modeling and Applications I (graduate) Fall 2025
- DSC 382: Foundations of Regression and Predictive Modeling (graduate) Spring 2025
- SDS 324E: Elements of Regression Analysis (undergraduate) Fall 2024

OTHER WORK EXPERIENCE

- AI Research Resident, FPT Software AI Center - Ho Chi Minh City, Vietnam 2022 – 2024
- Actuarial Analyst, Sun Life Financial - Ho Chi Minh City, Vietnam 2019 – 2022
- Actuarial Candidate, Society of Actuaries - [Record](#) 2019 – 2022

AWARD AND SCHOLARSHIP

Highest GPA, 2016–2020 mathematics cohort at University of Science, Ho Chi Minh City	2020
Vietnam Institute for Advanced Study in Mathematics (VIASM) Scholarship	2018, 2019, 2020
Silver Medals, Vietnam Mathematics Olympiad for Undergraduate Students	2017, 2018
Odon Vallet Scholarship	2017
Ranked 1st among 7,400 candidates in Soc Trang City, National University Admission Exam	2016