

Patrick Pynadath

📍 West Lafayette, Indiana, United States ✉ pynadat@purdue.edu ☎ 1-224-281-2295

About me

Bio: I am a PhD student at Purdue University, studying Machine Learning under the guidance of Professor Ruqi Zhang. I am broadly interested in probabilistic machine learning methodologies. I am currently working on discrete diffusion.

Interests: MCMC, Probabilistic Modeling (Diffusion, EBMs), LLM controlled generation

Packages/Frameworks: PyTorch, Pytorch Lightning, Hydra, Slurm, Tensorflow, Numpy, Matplotlib, BeautifulSoup, Hugging Face Transformers

Education

Purdue University *PhD, Computer Science*

Aug. 2023 – Current

Northwestern University *BA Mathematics, MS Computer Science*

Sept. 2018 - Dec. 2022

Publications

CANDI: Hybrid Discrete-Continuous Diffusion Models

Preprint 2025

Patrick Pynadath, Jiaxin Shi, Ruqi Zhang

<https://arxiv.org/pdf/2510.22510> [🔗](#)

VERA: Variational Inference Framework for Jailbreaking Large Language Models

NeurIPS 2025

Anamika Lochab*, Lu Yan*, *Patrick Pynadath**, Xiangyu Zhang, Ruqi Zhang

** indicates equal contribution*

<https://arxiv.org/pdf/2506.22666> [🔗](#)

Controlled LLM Decoding via Discrete Auto-regressive Biasing

ICLR 2025

Patrick Pynadath, Ruqi Zhang

<https://www.arxiv.org/pdf/2502.03685> [🔗](#)

Gradient-based Discrete Sampling with Automatic Cyclical Scheduling

NeurIPS 2024

Patrick Pynadath, Riddhiman Bhattacharya, Arun Hariharan, Ruqi Zhang

<https://arxiv.org/pdf/2402.17699> [🔗](#)

Experience

Teaching Assistant *Purdue University*

Graduate Statistical Machine Learning, Aug. 2024 - Dec. 2024

- Assisted students with understanding foundational methods within machine learning during office hours

Undergraduate Algorithms Course, Aug. 2023 - December 2023

- Led weekly student class sessions to review content covered during lectures
- Provided guidance for homework assignments and exam preparation during Office Hours