Patrick Pynadath

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About me

Bio: I am a PhD student at Purdue University, studying Computer Science under the guidance of Professor Ruqi Zhang. I am broadly interested in probabilistic machine learning methodologies.

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

Education

Purdue University *PhD, Computer Science*   *Aug. 2023 – Current*
- **Coursework:** Statistical Machine Learning, Graduate Algorithms, Natural Language Processing, Computer Networks

Northwestern University *BA Mathematics, MS Computer Science*   *Sept. 2018 - Dec. 2022*
- **GPA:** 3.8/4.0
- **Coursework:** Real Analysis, Probability Theory, Quantum Computing, Machine Learning, Deep Learning

Experience

Teaching Assistant *Purdue University*   *Aug. 2023 - Current*

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

Publications

Gradient-based Discrete Sampling with Automatic Cyclical Scheduling   NeurIPS 2024
Patrick Pynadath, Riddhiman Bhattacharya, Arun Hariharan, Ruqi Zhang
https://arxiv.org/pdf/2402.17699 ↗

Controlled LLM Decoding via Discrete Auto-regressive Biasing   ICLR 2025
Patrick Pynadath, Ruqi Zhang
https://www.arxiv.org/pdf/2502.03685 ↗

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 ↗

Technologies

Languages: C++, C, Java, Python, SQL
Packages/Frameworks: PyTorch, Tensorflow, Numpy, Matplotlib, BeautifulSoup, Hugging Face Transformers