Pascal Jutras-Dubé

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Summary

I'm a PhD student in Computer Science at Purdue University (advised by Ruqi Zhang) working on sampling and generative modeling via learned stochastic processes (diffusions, jump processes). I'm interested in generative modeling, probabilistic inference, planning, and discrete/mixed-type data generation.
Now seeking: Summer 2026 research/applied scientist internships.

Education

PhD	Computer Science	Purdue University	2023 – Present	GPA 3.95/4
Msc	Computer Science	University of Montreal	2020 – 2022	
BSc	Mathematics and Computer Science	University of Montreal	2017 – 2020	

Work Experience

- **Purdue University** *Jan 2023 - Present*
  Teaching Assistant / Research Assistant West Lafayette, IN
  – **RA:** Developed a jump-diffusion formulation that unifies hybrid discrete–continuous diffusion for discrete data generation. Derived the reverse-time generator (continuous score + hazard-driven sticking) and proposed Denoising Hazard Matching with an event-driven sampler.
  – **TA:** PhD-level Statistical Machine Learning (CS578)
- **National Bank of Canada** *June 2021 - Nov 2022*
  Research Intern Montreal, QC
  – Research in privacy-preserving data publishing

Publications

Jutras-Dubé, P., Zhang, J., Wang, Z., & Zhang, R. (2025). *One-Step Diffusion Samplers via Self-Distillation and Deterministic Flow.* arXiv preprint arXiv:2512.05251. [Under Review]

Punyamoorty, P.*, **Jutras-Dubé, P.***, Zhang, R., Aggarwal, V., Conover, D., & Bera, A. (2025). *Dynamic Obstacle Avoidance through Uncertainty-Based Adaptive Planning with Diffusion.* International Conference on Intelligent Robots and Systems (IROS).

Jutras-Dubé, P., Pynadath, P., & Zhang, R. (2025). *Single-Step Consistent Diffusion Samplers.* arXiv preprint arXiv:2502.07579, Frontiers in Probabilistic Inference Workshop at ICLR.

Mesana, P., **Jutras-Dubé, P.**, Crowe, J., Vial, G., & Caporossi, G., Gambs, S. (2025). *Measuring privacy/utility tradeoffs of format-preserving strategies for data release.* Journal of Business Analytics.

Jutras-Dubé, P., Al-Khasawneh, M. B., Yang, Z., Bas, J., Bastin, F., & Cirillo, C. (2024). *Copula-based transferable models for synthetic population generation.* Transportation Research Part C.

Jutras-Dubé, P., Zhang, R., & Bera, A. (2024). *Adaptive planning with generative models under uncertainty.* International Conference on Intelligent Robots and Systems (IROS).

Mesana, P., **Jutras-Dubé, P.**, Crowe, J., Vial, G., & Caporossi, G. (2024). *Evaluating the risk of re-identification in data release strategies: An attacker-centric approach.* Hawaii International Conference on System Sciences (HICSS).

Additional Information

- **Posters & Orals**: MMLS 2025 (Oral, top 8%), FPI-ICLR 2025, IROS 2024, SAE 2022 (Oral), HEC Optimization Days 2022 (Oral)
- **Professional Service**: Served as reviewer for AISTATS 2026, ICLR 2026, 2025, ICRA 2025, RA-L 2026, 2025
- **ML Stack**: JAX or Pytorch, Hydra, Weights & Biases, and more
- **Languages**: French (native), English (proficient)
- **Almost Surely**: I design fashion for the STEM community almost-surely.com
- **Awards**: Scholarship for Graduate Studies (University of Montreal, 2021), DIRO Excellence Scholarship (4 times) (University of Montreal, 2020–2022), Fin-ML CREATE Graduate Scholarship (2020)