Gianluigi Silvestri

PhD Researcher | Generative Models

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PhD researcher in machine learning specializing in deep generative models, with research experience at Sakana AI, Sony AI, and Qualcomm AI Research. Research spans flow maps and score-based models, normalizing flows, generative autoencoders, and LLM distillation, with publications at ICML and ICLR.

RESEARCH & INDUSTRY EXPERIENCE

Sakana AI | **Research Intern** - Tokyo, Japan — Oct 2025 - Jan 2026

- Researched distillation methods for efficient LLM reasoning.
- Co-authored "Learning from Partial Chain-of-Thought via Truncated-Reasoning Self-Distillation" (arXiv, 2026).

Sony AI | **Research Intern** - Tokyo, Japan — Aug 2024 - Feb 2025

- Developed variance-reduction techniques for training consistency models from scratch.
- Related work: "VCT: Training Consistency Models with Variational Noise Coupling" (ICML 2025).

Qualcomm AI Research | **Research Intern** - Amsterdam, Netherlands — Jun 2022 - Sep 2022

- Researched adaptive compressed sensing for inverse problems using deep reinforcement learning.

OnePlanet Research Center | **PhD Machine Learning** - Wageningen, Netherlands — Dec 2020 - Jul 2025

- Researched deep generative models and probabilistic inference.
- Published work at ICLR and ICML, including an ICLR 2023 Spotlight.

Modulai AB | **Machine Learning Engineer** - Stockholm, Sweden — Jun 2019 - Nov 2020

- Built and deployed end-to-end ML systems for startups and industry clients across different industries..

SELECTED PUBLICATIONS

- **Silvestri et al.** "Learning from Partial Chain-of-Thought via Truncated-Reasoning Self-Distillation." **arXiv, 2026**
- **Silvestri et al.** "CoVAE: Consistency Training of Variational Autoencoders." **arXiv, 2025**
- **Silvestri et al.** "VCT: Training Consistency Models with Variational Noise Coupling." **ICML 2025**
- **Ventura*, Achilli*, Silvestri* et al.** "Manifolds, Random Matrices and Spectral Gaps: The geometric phases of generative diffusion." **ICLR 2025** - *Equal contribution
- **Silvestri, Roos, Ambrogioni** "Deterministic training of generative autoencoders using invertible layers." **ICLR 2023** - Spotlight (Top 25%)
- **Silvestri et al.** "Embedded-model flows: Combining the inductive biases of model-free deep learning and explicit probabilistic modeling." **ICLR 2022**

EDUCATION

Radboud University | **PhD Machine Learning** - Nijmegen, Netherlands — 2020 - 2026

- Thesis completed; defense pending.

KTH Royal Institute of Technology | **MSc Machine Learning** - Stockholm, Sweden — 2017 - 2020

University of Parma | **BEng Computer Engineering** - Parma, Italy — 2012 - 2017

SKILLS

Programming: Python, C/C++, SQL

ML frameworks: PyTorch, JAX/Flax, TensorFlow/Keras, TensorFlow Probability

Infrastructure: Docker, AWS, GCP, Azure, DVC, Airflow

ACADEMIC SERVICE

Reviewer: NeurIPS 2023, 2025 (Top Reviewer); ICLR 2024-2026; ICML 2024-2026