

Alexandre Vérine

Ph.D Student in Machine Learning at Université Paris-Dauphine
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|--------------|---|--------------------------------|
| PUBLICATIONS | Optimal Budgeted Rejection Sampling for Generative Models <i>Alexandre Vérine, Benjamin Negrevergne, Muni Sreenivas Pydi, Yann Chevalleyre</i> Arxiv Preprint - Under Review | |
| | Precision-Recall Divergence Optimization for Generative Modeling with GANs and Normalizing Flows <i>Alexandre Vérine, Benjamin Negrevergne, Muni Sreenivas Pydi, Yann Chevalleyre</i> Thirty-seventh Conference on Neural Information Processing Systems - (NeurIPS2023) | |
| | Training Normalizing Flows with the Precision-Recall Divergence <i>Alexandre Vérine, Benjamin Negrevergne, Muni Sreenivas Pydi, Yann Chevalleyre</i> Arxiv Preprint | |
| | On the expressivity of bi-Lipschitz normalizing flows <i>Alexandre Vérine, Benjamin Negrevergne, Fabrice Rossi, Yann Chevalleyre</i> The 14th Asian Conference on Machine Learning (ACML2022) | |
| | On the expressivity of bi-Lipschitz normalizing flows <i>Alexandre Vérine, Benjamin Negrevergne, Fabrice Rossi, Yann Chevalleyre</i> ICML Workshop on Invertible Neural Networks, Normalizing Flows, and Explicit Likelihood Models (INNF+2021) | |
| TEACHING | Introduction to Deep Learning <i>Université Paris-Dauphine - Executive Master</i> | 2023 Lectures |
| | Trustworthy AI via Data Science Projects <i>Université Paris-Dauphine - Executive Master</i> | 2022-2023 Lectures |
| | Machine Learning Projects <i>Université Paris-Dauphine - IASD Master's Degree</i> | 2022 Lectures |
| | Mathematics for Data Science <i>Université Paris-Dauphine - Master's Degree</i> | 2020-2022 Lectures/Seminars |
| | Advanced Machine Learning - Normalizing Flow <i>Université Paris-Dauphine - IASD Master's Degree</i> | 2021 Lecture |
| | Artificial Intelligence <i>Université Paris-Dauphine - Master's Degree</i> | 2021 Seminars |
| | Information System Engineering <i>Université Paris-Dauphine - Bachelor's Degree</i> | 2020 Lectures/Seminars |
| RESEARCH | LAMSADE | September 2019 - June 2020 |
| INTERNSHIPS | <i>Université Paris-Dauphine</i> | Paris, France |

- Part-Time Research internship on generation of Adversarial Attacks with Invertible Neural Networks.

Machine Learning & Data Lab

April 2019 - August 2019

Wavestone

Paris, France

- Master's degree research internship on Invertible Neural Networks as a defense against Adversarial Attacks.

Advanced Structures & Composites Center

May 2018 - August 2018

University Of Maine

Orono, Maine, USA

- Research internship on organic photovoltaics materials. Developed a portable characterizing device for photovoltaic wire. Designed military application for the photovoltaic wire woven fabric.

EDUCATION

PhD in Artificial Intelligence

September 2020 - Present

Université Paris-Dauphine

Paris, France

- 3 years contract with LAMSADE Laboratory.
- Subject: Precision and Recall for Generative Models.
- Advisors: Yann Chevalere, Fabrice Rossi, Benjamin Negrevergne.

M.S Quantitative Economics

September 2019 - June 2020

Université Paris-Dauphine

Paris, France

- Last year of ENS Paris-Saclay as a multi-disciplinary one year program.
- Related Courses: Microeconomics, Macroeconomics, Econometrics, Game theory, Industrial Organization.

M.S. MVA - Mathematics, Vision & Learning

September 2018 – April 2019

École Normale Supérieure Paris-Saclay

Cachan, France

- Related courses: Reinforcement Learning, Deep Learning, Statistical Learning, Kernel Methods, Natural Language Processing, Astrophysics data processing, Probabilistic Graphical Models.
- Awarded with very high honors.

M.S. Electrical Engineering

September 2017 – May 2018

École Normale Supérieure Paris-Saclay

Cachan, France

- Related courses: Probabilities, Computing, Energy Processing, Signal Processing, Telecommunication, Automation.
- Research project: Thermic modelisation of a solar powered, self commuted, variable reluctance motor and life expectancy estimation for the french company SAUREA SAS.
- Awarded with high honors. Rank: 3/24.

M.S. Fundamental physics

September 2017 – September 2018

Université Paris-Sud

Orsay, France

- One year program as evening lectures.
- Related courses: Plasma physics, atoms and molecule structure, atomic nucleus and particles, optical physics, laser physics.
- Awarded with high honors.

B.S. General Engineering

September 2016 – September 2017

École Normale Supérieure Paris-Saclay

Cachan, France

- Related courses: Mathematics, Computing, Mechanics, Energies, Numerical Electronics, Biologic electricity.
- Team Project: Building and designing an electronic spinet able to play any recorded song.
- Awarded with high honors. Rank: 16/60.

B.S General Engineering

September 2014 - July 2016

Lycée Chaptal

Paris, France

- Intensive 2-years course in preparation to sit the national competitive examinations for admission to the French Grandes Ecoles of physics and engineering.
- Related courses: Mathematics, Physics, Chemistry, Engineering, Computing.
- Individual Project: Building and designing the software, the hardware and the mechanical structure of a reduced SegWay System.