

## Alexandre Vérine

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Ph.D Student in AI at Université Paris-Dauphine

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PUBICATIONS	<b>Precision-Recall Divergence Optimization for Generative Modeling with GANs and Normalizing Flows</b> <i>Alexandre Vérine, Benjamin Negrevergne, Muni Sreenivas Pydi, Yann Chevalleyre</i> Arxiv Preprint - Under Review	
	<b>Training Normalizing Flows with the Precision-Recall Divergence</b> <i>Alexandre Vérine, Benjamin Negrevergne, Muni Sreenivas Pydi, Yann Chevalleyre</i> Arxiv Preprint	
	<b>On the expressivity of bi-Lipschitz normalizing flows</b> <i>Alexandre Vérine, Benjamin Negrevergne, Fabrice Rossi, Yann Chevalleyre</i> Asian Conference of Machine Learning (ACML2022)	
	<b>On the expressivity of bi-Lipschitz normalizing flows</b> <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	<b>Introduction to Deep Learning</b> <i>Université Paris-Dauphine - Executive Master</i>	2023 Lectures
	<b>Trustworthy AI via Data Science Projects</b> <i>Université Paris-Dauphine - Executive Master</i>	2023 Lectures
	<b>Machine Learning Projects</b> <i>Université Paris-Dauphine - IASD Master's Degree</i>	2022 Lectures
	<b>Mathematics for Data Science</b> <i>Université Paris-Dauphine - Master's Degree</i>	2020-2022 Lectures/Seminars
	<b>Advanced Machine Learning - Normalizing Flow</b> <i>Université Paris-Dauphine - IASD Master's Degree</i>	2021 Lecture
	<b>Artificial Intelligence</b> <i>Université Paris-Dauphine - Master's Degree</i>	2021 Seminars
	<b>Information System Engineering</b> <i>Université Paris-Dauphine - Bachelor's Degree</i>	2020 Lectures/Seminars
RESEARCH	<b>LAMSADE</b> <i>Université Paris-Dauphine</i>	September 2019 - June 2020 Paris, France
INTERNSHIPS	<ul style="list-style-type: none"><li>Part-Time Research internship on generation of Adversarial Attacks with Invertible Neural Networks.</li></ul>	
	<b>Machine Learning &amp; Data Lab</b> <i>Wavestone</i>	April 2019 - August 2019 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: Invertible Neural Networks.
- Advisors: Yann Chevaleyre, 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 programm 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.