

# ALEXANDRE VERINE

## MACHINE LEARNING PHD

### CONTACT

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### SKILLS

Python   
Pytorch   
Slurm 

### EDUCATION

**MS in Quantitative Economics**  
**Université Paris-Dauphine**  
2020  
One year of Master of Science Degree in Quantitative Economics at Université PSL ranked #40 on the Shanghai ARWU 2023 and #51-75 in Economics.

**MS in Machine Learning**  
**École Normale Supérieure Paris-Saclay**  
2019  
Master MVA at Université Paris-Saclay. Ranked #16 on the Shanghai ARWU 2023 and #1 in Mathematics.

**MS in Fundamental Physics**  
**Université Paris-Saclay**  
2018  
One year of Master of Science Degree in night classes in fundamental and theoretical physics.

**BS in Electrical Engineering**  
**École Normale Supérieure Paris-Saclay**  
2017-2018  
Bachelor of Science in Electrical, Electrotechnical and Automation at Université Paris-Saclay

### PROFILE

PhD candidate in Machine Learning, specialising in the expressivity of generative models, targeting job opportunities for January 2024. Demonstrated expertise in Python and PyTorch, deep learning models, and working with computing clusters. Valued for my pedagogical skills and ability to thrive in a research setting.

My goal is to apply my technical proficiency within a team where continuous learning is encouraged, contributing to advancements in the machine learning domain.

### WORK EXPERIENCE

#### PhD in Machine Learning

Université PSL - Université Paris-Dauphine, France 2020-2023

- 3 years PhD contract at University PSL ranked #40 on the Shanghai ARWU 2023 and #12 in Mathematics.
- Studied the expressivity and the performance of deep generative models via the spectrum of the diversity/precision trade-off. Designed and trained large models to tackle user-specified problems.
- Developed strong programming skills in Python and Pytorch to design training procedures of large generative models on parallelised GPU clusters.
- Active member of the Machine Intelligence and LEarning Systems (MILES) team, part of the Université PSL and PRAIRIE research environment.
- Multiple publications including in Machine Learning and AI conferences.
- Taught in Master of Science and Executive Master: Mathematics for Data Science (MS), Machine Learning Project (MS), Introduction to Deep Learning (EM), Trustworthy AI via Data Science Project (EM).

#### Research Intern and Consultant Intern

Wavestone, France 2019

- 6 month hybrid internship at Wavestone consulting firm and Université Paris-Dauphine MILES research team.
- Engaged in a consulting role with a banking company focused on AI interpretability tools: led the design and facilitation of workshops covering essential AI interpretability tools, offering insight into their advantages, limitations, and Python-based implementation methods.
- Research intern of Machine Learning Robustness: Adversarial Examples generation via Deep Generative Models. Designed a method to generate approximative adversarial examples to accelerate adversarial training of classification models in order to improve robustness.

#### Research Intern

Advanced Structures & Composites Center, University of Maine, USA 2018

- 4 month research internship focused on developing testing procedure of organic photovoltaic materials and building military applications.

### INTEREST

- Photography
- Sponsored motorcycle adventure expeditions
- 3D Printing and embedded system design.
- Climbing and bouldering

### LANGUAGE

- English (C1)
- French (native)