

MATTHIEU OLEKHNOVITCH

STUDENT AT ECOLE POLYTECHNIQUE & ENSAE



CONTACT

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CODING

- Python - C++ - Java - JS
- ML** : Pytorch - Keras - Sklearn - Stata
 - Data** : SQL - Redis - DataBricks
 - Web** : Vite - Django - Docker

LANGUAGES

- French - **Native**
- English - **C2** (107/120 TOEFL)
- German - **B2**
- Russian - **A2**

PROJECTS

Research paper : Times series latent space augmentation

Recent paper currently under review at ICLR & ICML 2025. Tackles high dimensional issues of times series pattern recognition using abstract layers and iterative augmentations

Ref: [Tackling the Generative learning trilemma through VAE and GMM-controlled latent space class expansion](#)

ICAIF 2024 Crypto Market Simulation for Risk Estimation

Enhanced the 'TailGAN' model for tail risk scenarios, incorporating VaR and Expected Shortfall into the training loop. Used latent models and time series augmentation to improve risk estimation under extreme market conditions.

Digital Services (h)Acked - Brussels 2024

Conducted sentiment analysis on large datasets and implemented efficient processing techniques for handling large files. Utilized the French HPC 'Jean Zay' for computational research, optimizing performance for high-volume data analysis.

EDUCATION

ÉCOLE NATIONALE DE STATISTIQUE ET D'ADMINISTRATION ÉCONOMIQUE (PARIS, FRANCE) 2024 - Present

Diplôme d'ingénieur, Mathematics & Statistics

Major: **Financial Mathematics**

Relevant coursework: Statistical Learning, Risk Management, Advanced Machine Learning, Stochastic Calculus, Financial Derivatives Pricing, Algorithmic Trading, and Portfolio Management.

ÉCOLE POLYTECHNIQUE (PALAISEAU, FRANCE) 2021 - Present

Diplôme d'ingénieur, Mathematics & Computer Science

Major: **AI & Scalable Data Science** | GPA: 3.75/4

Relevant coursework: Machine Learning, Advanced Machine Learning, Deep Learning, Optimization, C++ for Data Analysis, Algorithm Design, Big Data Systems, Statistics in Action, and Variational Analysis of Partial Differential Equations.

LYCEE PASTEUR (NEUILLY, FRANCE) 2019 - 2021

Classes préparatoires aux grandes écoles (CPGE)

Major: **Mathematics & Physics** | GPA: 4.0/4.0

Completed a demanding two-year preparatory program in mathematics, physics, and chemistry, focused on preparing for elite national competitive entrance exams.

WORK EXPERIENCE

UNIVERSITY OF LUXEMBOURG (LUXEMBOURG)

ML Researcher Intern - Times Series - SERVAL Team Apr. 2024 - Sep. 2024

Specialized in developing and applying advanced auto-augmentation techniques to improve time series classification and forecasting accuracy. Designed an enhanced iteration of the AutoAugment algorithm, tailored for large-scale, high-dimensional data. Authored a research paper on time series auto-augmentation, currently under review at **ICLR & ICML 2025**, showcasing novel methods for optimizing model performance in quantitative and financial contexts.

WORLDLINE (LYON, FRANCE)

ML Researcher Intern - LABS Department

Jun. 2023 - Sep. 2023

Conducted AI-driven sentiment analysis and automated issue forecasting for large-scale programming projects. Optimized data retrieval and conflict detection to improve issue prediction and management in large teams.

REWARDS

France Defence ministry bronze medal

2022 - Delivered by the french army ministry by way of exception

Outstanding investment award

2023 - Delivered by EcolePolytechnique for the investment in the associative life

Louis-Edouart Rivot Medal - Best Computer Science Research Internship (École Polytechnique)

2024 - Awarded by the French Academy of Sciences (Académie des Sciences) for outstanding research on Time Series Analysis conducted at the University of Luxembourg.