28 years old – french

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romain-ilbert

https://romain.ilbert.com

ÎLE-DE-FRANCE - FRANCE

SKILLS

- **Mathematics**

Statistical Learning, Statistics, Optimization, Linear Algebra, Probabilities, Topology

- **Python**

PyTorch, Tensorflow, Cuda, Numpy, Pandas, Scikit-Learn, Scipy, Keras, GPU Cluster Utilization, Matplotlib, Seaborn, Hugging Face Transformers

- **Finance**

Stochastic calculus, Arbitrage, Binomial and Black-Scholes models, Pricing, Replications of derivatives, Options, Portfolio Management, Trading, Quantitative Models

- **Microsoft Office, Overleaf, Git, Coding in Solidity**

LANGUAGES

- **French** Native Speaker
- **English** C1 (IELTS 7.5)
- **Spanish** B2

INTEREST

- **Sports**
  - Soccer
  - Volley
  - Table Tennis
  - Gym
- **Travels**
- **Music**
  - Drums
  - Rock
- **Theater, Chess, Poems author**

Romain ILBERT

Ph.D. in Deep Learning

WORK EXPERIENCE

PhD in Representation Learning For Multivariate Time Series

From 12/2021 to 04/2025 — **PARIS-CITE UNIVERSITY & HUAWEI - PARIS AREA**

Fixed-Term Contract and PhD supervised by Ievgen Redko and Themis Palpanas

- **Lead and developer of SAMformer**: a lightweight state-of-the-art sharpness-aware transformer-based forecasting model, including studies on rank, entropy, and sharpness in attention mechanisms, *Oral at ICML 2024*
- **Analyzing Multi-Task Regression via Random Matrix Theory**, *Spotlight at NeurIPS 2024*
- **Enhancing Multivariate Time Series Forecasting via Multi-Task Learning and Random Matrix Theory**, *NeurIPS Workshop: Time Series in the Age of Large Models*
- **Data Augmentation for Multivariate Time Series Classification**, *ICDE workshop* (A*)
- **Adversarial Machine Learning for Time Series Forecasting**, *ACM CCS workshop* (A*)
- **Foundation Models for Multivariate Time Series Classification** *ICDE workshop* (A*)
- **Mantis : A lightweight calibrated foundation model,** *long oral at Cap 2025*

Machine Learning Engineer Intern

From 05/2021 to 11/2021 — **SNCF - LA DEFENSE**

Data Science internship in Time Series Forecasting

- Crafted a model to predict train ticket sales across thousands of stations in France, (MAPE 10% at 92 days, nationwide rollout)
- Used Microsoft Azure virtual machines and Jenkins for efficient model deployment
- Performed extensive SQL queries on large-scale datasets

Machine Learning Research Intern

From 06/2020 to 10/2020 — **CNRS - PALAISEAU**

Research Internship in Computational Finance and Energy Markets

- Developed a quantitative strategy for maximizing wind energy producers' profits
- Utilized TensorFlow and Stochastic Calculus to solve complex partial differential equations modeling optimal trading strategies
- Explored the Universal Approximation Theorem to apply neural network solutions

Quantitative Research Intern

From 06/2019 to 08/2019 — **ROTHSCHILD & CO - MONACO**

Internship in Quantitative Finance and Portfolio Management

- Developed a quantitative model outperforming Euro Stoxx 50 over 20 years (x3.13)
- Use of financial software (Facstet, Bloomberg) for data manipulation

EDUCATION

2018-2021 France — **ENSAE Paris and Ecole Polytechnique – Palaiseau**

- **Master in Data Science at Ecole Polytechnique**

Deep Learning (M. Cuturi), Reinforcement learning (E. Le Pennec), Statistical Learning, Recommendation systems, Auction and matching (V. Perchet), Computer Vision, Hackathon with Carrefour, Data Camp Astrophysics Project (A.Gramfort and T. Moreau), GPU Programmation (in C)

- **Master in Data Science and Statistical Learning at ENSAE**

Advanced Optimization, Optimal Transport (M. Cuturi), Statistics (A.Dalalyan), Compressed Sensing (G. Lecué), Online Learning (A. Tsybakov), NLP
Applied statistics project with Banque de France : Co-clustering and PCR algorithm with missing data for the identification of underlying states of an economic and financial system

2016-2018 France — **Lycée Masséna - Nice**

- **Classe préparatoire aux grandes écoles ECS1 - ECS2**

Mathematics (HEC 20/20, Essec 20/20 [url], Edhec 20/20), Computer Science, Geopolitics, English, Spanish, Philosophy, History & Geography, General Culture

2014-2016 France — **Lycée Masséna - Nice**

- **Classe préparatoire aux grandes écoles MPSI - MP**

Mathematics, Physics, Computer science, Philosophy, English, Spanish option

OTHER EXPERIENCES

- **Reviewer for ICML 2024, NeurIPS 2025, VLDB 2024 & 2025**
- **Treasurer at KryptoSphère ENSAE (Crypto currency Association)**
  - **Coding in Solidity**
- **Mathematics Tutor (3 students in CPGE)**