LOVICHI Louis-Marie

Paris, FRANCE

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EDUCATION

MSc Probability and Finance (ex DEA El Karoui) (Sorbonne University, Paris)

Numerical Probability - Stochastic Modelling of Derivatives in Traditional and Digital Finance
Stochastic Control - Financial Markets and Financial Theory.

MSc MVA Additional Courses (Université Paris-Saclay)

Machine Learning for Time Series – Convex Optimization and Applications in Machine Learning.

Engineer's Degree at École Polytechnique (X2019) (Palaiseau)

2019 – 2023

Engineer's Degree at École Polytechnique (X2019) (Palaiseau)

Statistics – Modeling Random Phenomena – Optimization and Control – Machine Learning –

Algorithm Design and Analysis – Algorithms for Data Analysis – Object-oriented Programming.

Engineer's Degree (*Data Science MSc program*) at **ISAE-Supaero** (Toulouse)

Statistical learning – Supervised and unsupervised learning algorithms – Deep learning –

Reinforcement learning – Stochastic optimization and evolutionary algorithms – Big Data tools.

MSc in **Operations Research** (Université Paul Sabatier, Toulouse)

Deterministic Global Optimization – Mathematical Optimization for Machine Learning –

Advanced Combinatorial Optimization.

Preparatory Class [Bachelor's Degree] (CPGE : MPSI-MP*) at Lycée Fabert (Metz)

An intensive program in Mathematics, Computer Science and Physics. Admitted to X and ENS Ulm.

WORK EXPERIENCE

Research Intern (Winamax, Paris)

Apr 2023 – September 2023 se learning algorithms and time

I designed models to estimate the outcome probabilities of sport events based on machine learning algorithms and time series analysis (PARX, EWMA). I then developed a Python microservice using FastAPI and implemented two Streamlit applications for sports events odds models.

Teaching Assistant (Lycée Pierre de Fermat, Toulouse)

 $Sep\ 2022-Mar\ 2023$

2023 - 2024

2022 - 2023

I conducted weekly oral examinations in Mathematics for undergraduate students (CPGE).

Data Scientist Intern (Berlin Brands Group, Berlin)

Jun 2021 - Sep 2021

As part of the Pricing and Forecasting team, I analyzed the company's 4,000 products available for sale on various European marketplaces and developed sales forecasting and price elasticity estimation models implemented in Python. These models are updated daily on PowerBI dashboards to support decision-making for category managers.

Officer (Paris Fire Brigade (BSPP), Paris)

Oct 2019 – Apr 2020

I was fully trained in emergency first aid and served as the chief on a first aid vehicle, responsible for a two-firefighter crew.

PROJECTS

Space objects maneuver detection

March 2023

1st place in a 3-day hackathon with a group of 4. We reconstructed the signals with a Gaussian Process based on a combination of two base kernels and employed a Temporal Convolutional Network (TCN) using Pytorch library to achieve a 90 % accuracy.

Reinforcement learning for optimal control of air conditioning system

 $Oct\ 2022-March\ 2023$

An industrial supplied a black-box FMU for MATLAB to simulate an air flow system's behavior. We developed a Python interface and applied DDPG and SAC deep reinforcement learning algorithms to control the valve with a current command.

LANGUAGES

French (Native) - German (Proficient [C2]) - English (Advanced [C1]) - Luxembourgish (Advanced)

Interest and Hobbies

Volunteering I served as a young volunteer fireman in my hometown from 2012 to 2017.

Track and field 1500m: 4'18" – 3000m: 9'24" – 10km: 34'47" – Marathon: 2h55.

Skydiving Former president of skydiving activities at X – 365 jumps since 2014.

Music I played the trumpet for 9 years in orchestras and in a musical.