

YASSINE MANNAI

About Me

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Education

University of Paris Dauphine – PSL

Sep 2023 – Jan 2027

Master's in Financial Engineering - Quant Track

Paris, France

- **Coursework:** Stochastic Calculus, Bayesian/Non-linear Econometrics, Machine Learning, Deep Learning, FX & Commodity Trading, Volatility Strategies, Structured Products, Statistical Arbitrage
- **Master's thesis:** *Regime-Conditional Total Portfolio Approach*. Developed a four-state Hidden Markov Model to support dynamic strategic asset allocation and quantify regime-dependent opportunity costs.

Professional Experience

Generali France

Sep 2025 – Present

Quantitative Strategist – Apprentice

Paris, France

- Replicated the **GSRAI stress index** using four principal components extracted from Bloomberg credit-spread, rates, equity-volatility, and FX data, achieving a **98% correlation** with the benchmark.
- Developed and backtested a **portable-alpha framework** across eight liquid diversifiers, deriving correlation-based overlay capacities under a volatility-preserving risk budget.
- Built an **LLM-powered research pipeline** combining document parsing, semantic analysis, and structured macro-signal extraction from broker research for portfolio-monitoring dashboards.

BNP Paribas CIB

Mar 2025 – Aug 2025

Cross-Asset Structured Products Sales – Intern

Paris, France

- Priced cross-asset structured products, including Autocalls, CLNs, Sharkfins, and Steepeners, coordinating with Trading and Structuring on tailored investment and hedging solutions.
- Analyzed payoff profiles, pricing levels, barrier events, market scenarios, and key risk exposures across equity, credit, rates, and commodity-linked underlyings.

Credit Agricole CIB

Sep 2024 – Feb 2025

Quantitative Risk Analyst – Intern

Paris, France

- Developed a Python-based historical simulation framework to model stressed liquidity gaps and assess tail risk across market and funding scenarios over multiple time horizons.
- Performed sensitivity and stress-scenario analyses on **LCR**, **NSFR**, and **ALMM** indicators, automating calculations, reconciliation checks, and validation controls in **VBA**.

BIAT CIB

Jun 2024 – Aug 2024

FX & Commodity Derivatives Trading – Intern

Tunis, Tunisia

- Built a **commodity-option pricing engine** combining Black–Scholes and Schwartz–Smith models to value derivative strategies and analyze market risk.
- Implemented and calibrated a **Kalman filter** in Python to estimate latent commodity-price factors.

Projects & Research

Pairs Trading with Wavelet Denoising | *Python, PyWavelets*

May 2026

- Replicated Eroglu et al. (2023), applying **MODWT sym22** denoising before cointegration-based pair selection on S&P 500 constituents; the backtested strategy returned approximately 10% annualized versus −1.8% unfiltered.

Multivariate Rough-Volatility Forecasting | *Python*

Apr 2026

- Replicated Bibinger et al. (2025), estimating component-wise Hurst exponents and forecasting realized volatility across DJIA constituents with mfBm, achieving lower out-of-sample RMSFE than HAR benchmarks.

CFM Data Challenge – HFT Microstructure Classification | *Python, scikit-learn, PyTorch*

Mar 2026

- Classified underlying assets from tick-by-tick order-flow data through microstructure feature engineering and irregular time-series modeling, achieving **56% out-of-sample accuracy**.

Skills

Programming: Python, R, SQL, VBA, C#, MATLAB

Python Stack: NumPy, Pandas, SciPy, statsmodels, scikit-learn, PyTorch

Platforms: Bloomberg, Refinitiv, Power Automate, Power BI, LaTeX

Languages: Arabic (native), English (fluent), French (fluent), Spanish (beginner)