Zakaria MAGDOUL

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EDUCATION & HONORS

Ecole Polytechnique (l'X) - Sorbonne University Paris 6 | Master 2 : DEA El Karoui - Probability and Finance

- PGSM Excellence Scholarship Laureat.
- Relevant coursework: Stochastic modeling of derivatives, Rate models, Stochastic Control, Non linear pricing, Stochastic Calculus .

Ecole Normale Supérieure Paris-Saclay | Master 2 : MVA - Machine Learning and Computer Vision

- Relevant coursework: Time Series Learning , Deep Learning , Statistical Learning , Bayesian Machine Learning .

Sorbonne University Paris 6 | Master 1 & Bachelor's : Applied Mathematics

- 4.0/4.0 Ranked 1st out of 273.
- Relevant coursework: Advanced Probability, Advanced Statistics, Stochastic Calculus and Control, PDE Approximations.

Ecole des Mines Nancy | Engineering Degree

- Relevant coursework: Probability, PDEs, Local and Global Optimisation, Data Analysis, Macro Economy.

Classes Prépa Morocco | MPSI MP*

- Mathematics and Physics Cram School in preparation for highly selective school's entrance exams.

PROFESSIONAL EXPERIENCE

Addactis France | *Quantitative Capital Modeling Analyst* Paris France | June 2024–August 2024

- Modeled assets and liabilities to assess exposure under different scenarios and developed various capital modeling solutions .
- Led Interest rate curve extrapolation method reconstruction project , following EIOPA 2020 Solvability II Review .

BMCE Capital | *Quantitative Analyst* Casablanca Morocco | June 2023–August 2023

- Priced complex derivative products using various models , comparing PDE vs Monte Carlo Methods
- Calibrated my models using data from the Bloomberg terminal , and studied volatility surfaces and implied distributions ..
- Made and back-tested arbitrage strategies on ETFs , conducted portfolio analysis .

Lorraine University Laboratory | *Machine Learning Data Scientist* Nancy France | Mai 2022–September 2022

- Worked on a project for the Lorraine City Hall (Mairie) , where I designed and developed a document classification pipeline.
- Trained and optimized a Random Forest classifier to categorize documents into classes (Id's, Passeports, etc), achieving 92 percent accuracy by tuning hyperparameters via grid search ..

QUANTITATIVE PROJECTS

- Designed and implemented a paper trading bot , using real-time market data from AV's API to execute a momentum-based strategy.
- Stochastic models in finance: refined the stochastic CIR model using the alpha-CIR approach, supervised by Dr. Madaline Deaconu.

SKILLS & INTERESTS

- **Technical**: Python (pandas, numpy, scipy Libraries) , C++, Git , VBA , Microsoft Office Suite
- **Certificates**: IELTS English C1 Level, JP Morgan Quantitative Research, Yale Financial Markets , DeepAI Neural Networks