Baptiste Loyer

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EDUCATION

Imperial College London and Mines Ponts Institute *GPA: 3.9 / 4.0* — Sep 2020 – Mar 2025
Double MSc/Meng –Mathematical, Computational Engineering and Quantitative Finance — London, UK
Mathematics, Stochastic Calc., Statistics, Volatility Trading & Derivatives, Algo Trading, Options Theory, Machine Learning

The Hong Kong University — Jan 2022 – Jun 2022
MSc – Financial Engineering and Computer Science — Hong Kong, HK
Machine Learning, Financial Engineering and Risk Management, Algorithmic Trading, Blockchain

Scientific Preparatory Class and Paris University — Sep 2017 – Jul 2020
Double BSc/BEng – Pure & Applied Mathematics, Computer Sciences and Physics — Paris, FR
Pure Mathematics, Physics, Mechanical Engineering, Chemistry, Philosophy

- Research: (Python) Pricing and Trading Equity Derivatives using Machine Learning & Deep Learning
- Research: (Python) Pair-Trading Strategy using K-Means Clustering Algorithm
- Research: (Python) Satellite emitter heat map full dimension resolution using Finite Difference Method

WORK EXPERIENCE

CdR Capital - Multi-Strat Systematic Fund — Feb – Aug 2024
Cross Asset Quantitative Trader — London, UK

- Conducted daily execution on equities, commodities, fixed income, futures and options across US, EU and Asian exchanges ($5M. daily)
- Built a ML based live tool in Python to optimize execution prices through intraday cross asset pattern research
- Delivered alpha research on commodities, FIS and worked on relative value volatility and stat arb strategies on equities/indices

Morgan Stanley — Jul 2023 – Feb 2024
Quantitative Trader - Off-Cycle Program — London, UK

Structuring Team - Exotic and Hybrids Options
- Automated daily tailored pricing of exotic and hybrids options for buy-side clients
- Developed a risk management live tool for Senior exotic equity derivatives traders
- Worked on differential machine learning to calibrate the stochastic local volatility parameters (VoV, Speed of Mean Rev., Mean)

QIS Team - Volatility Strategies
- Automated values and indicators generation on stocks via creation of a Python library
- Worked on backtests and research of relative value volatility strategies (Dispersion Trading, Skew Trading, Tail Trading)

CM-CIC - Banque Europeenne Credit Mutuel — Jun – Aug 2022
Quantitative Analyst (Received Return Full-Time Offer) — *France*

- Automated statistical methods to identify and measuring risk (VaR)
- Analyzed credit risk by quantifying scenarios using Bayesian networks and modelling risks using Monte Carlo simulations
- Presented extensive analysis and implemented solutions that led to a 5% reduction in computation time for the department

ACHIEVEMENTS

Morgan Stanley Hackathon — 2023
- Ranked 1st over 160 top UK uni. students and was offered internships in the front office — London, UK

Imperial College Student Investment Fund — Sept 2022 – Jun 2023
CIO Quantitative Strategies — London, UK
- Launched live volatility-scaled cross-sectional strategy on US Equity Sectors ETFs, with a value and hedge components
- Selected CIO from among 200 Imperial students, managed 6 senior analysts, 30 junior analysts, 5 strategies with an AUM of 100,000£

HKU Blockchain & Trading Group — Jan – May 2022
Quantitative Trader — Hong Kong, HK
- Backtested strategies across cryptocurrencies using Python, participated to ICO and DeFi investing

Mathematics Olympiad & radiography conference — May 2017
- Finalist, presented to leading professors, represented France, and received an award from a nuclear research chairman — Corsica, France

PROJECTS

- (Python) LSTM and Transformers based strategy on US Equities and ETFs (active SR: 2.7) — 2024
- (C++) Finite Difference Pricing vs Monte Carlo: Overview & Comparison — 2023
- (Python) Live Strategies - Momentum, Value, Derivatives — 2022

IT skills and Certifications

Programming Skills: Python, C++, R, Java, Matlab, SQL, VBA, Kdb, Tableau, Power BI
C++ Imperial College Certification, Bloomberg Market Concepts, Lifeguard Degree (summers 2017-18-19)

Languages

- English (native), French (native), Spanish (fluent), Mandarin (basic)

INTERESTS

- Chess, Poker, Rugby at National level, Powerlifting, Club flying, Adv. surf, Scuba diving, Ski golden arrow, Charity Member Navisu4d.org