El Mehdi Mouddene

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Profile

Financial technology professional with over 10 years of experience in capital markets and risk management, combining advanced quantitative skills with deep expertise in Python and C++ development. Proven track record in building and maintaining high-performance platforms for equity derivatives, risk analytics, and investment monitoring across top-tier global institutions. Adept at collaborating with trading, risk, and strategy teams to deliver robust analytical tools and scalable infrastructure that drive equity and debt business performance.

Core Competencies

- C++ for high-performance computing
- Quantitative Development in Python (OOP, NumPy, pandas, PySpark)
- Equity & Derivatives Pricing Models, Risk Analytics, and Trading Infrastructure
- Advanced Statistical & Mathematical Modeling (Monte Carlo, Stochastic Processes, Time Series)
- Machine Learning & Model Prototyping (scikit-learn, PyTorch Ignite)
- MLOps & Deployment (MLflow, FastAPI, Docker, Apache Airflow)
- Data Analysis & Visualization
- Design and Implementation of Scalable APIs and Real-Time Analytics Systems
- DevOps & Automation (CI/CD, Git, Jenkins)
- Cloud Platforms (AWS, GCP)
- Collaborative Development with Traders, Risk Managers & Strategy Teams (Agile, Cross-Functional)
- Stakeholder Engagement & Technical Leadership in Quant Projects

Professional Experience

Morgan Stanley — *Paris*

Lead Quant Developer – Equity Derivatives Risk

Apr 2023 – Present

- Modernized intraday risk platforms for the Global Equity Division.
- Improved low-latency analytics engines supporting real-time decision-making for traders and risk managers.
- Enhanced transparency and valuation coverage for equity derivatives exposures.
- Developed robust performance validation tools for risk analysis.

BNP Paribas CIB

Lead Data & Analytics - London

Jun 2021 – Apr 2023

- Developed a ML driven framework to optimise locates allocation in prime brokerage, improving inventory utilization and client prioritisation for hard-to-borrow securities based on predictive demand modelling and client profitability.
- Designed a centralized platform aggregating trades, positions, and margin data across Prime and Financing business.
- Improved client exposure visibility for trading, risk, and credit teams, supporting investment decision-making.
- Managed user adoption across Paris and London desks through effective stakeholder engagement.

Senior Software Engineer – Risk & Margin - Paris

Dec 2017 – Jun 2021

- Delivered analytics tools to monitor margin requirements and hedge fund credit exposures.
- Integrated quant models for portfolio risk across debt, equity, and derivatives instruments.
- Integrated risk models (SBM, RBM) and built valuation scenarios aligned with client-specific term sheets and mandates.

Software Engineer – Collateral Optimization - Paris
Jan 2015 – Dec 2017

- Optimized collateral allocation and improved liquidity management processes.
- Automated valuation and exposure tracking modules supporting investment desks.

Société Générale CIB — *Paris*
Software Engineer – Rogue Trading Investigation
Apr 2014 – Nov 2015

- Developed fraud detection and anomaly identification tools across asset classes.
- Supported compliance and investment control teams with automation of monitoring systems.

Education

Université Paris Dauphine – PSL
Master's degree, Financial Intelligence | *2014*

Certifications

IBM Data Science Specialization— *IBM*
Feb 2025

Machine Learning Specialization, Reinforcement Learning — *Stanford University*
Oct 2023

Machine Learning Specialization, Deep Learning — *Stanford University*
Oct 2023