Hicham Alaoui
Quantitative Analyst / Quant Developer

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Summary

Passionate engineer focused on transforming data into concrete business solutions. My approach combines intellectual curiosity with pragmatism to design intuitive and efficient decision-making tools for financial markets. My experiences have cultivated a cross-functional vision, enabling me to understand business challenges and propose solutions that truly align with strategic objectives. Driven by innovation and collaborative work, I seek to join Phi Partners' Quant Centre of Excellence to contribute to ambitious projects and create lasting value.

Education

INSEA – Rabat **2022 – 2025**
Engineer's degree: Applied Economics, Statistics & Big Data *GPA top 10%*

Professional Experience

Société Générale ATS **Mar 2025 – Aug 2025**
Data scientist Intern *Casablanca*

- Re-engineered pre-trade market-risk limit framework using Extreme Value Theory; freed EUR 1.8 m of RWA while reducing false positives to 1.3%.
- Integrated EVT model into proprietary C++ risk library and exposed it via Python APIs for intraday recalibration.
- Built CI/CD pipeline (Docker, GitLab) and monitoring stack (Prometheus, Grafana) achieving 89% unit-test coverage.
- Presented methodology to Risk Committee; green-lit for deployment across four equities desks.

GAEA21 **Jun 2024 – Sep 2024**
Data scientist Intern *Geneva*

- Crafted multilinear and tree-based models to forecast CO_2 emissions, translating research code into production-grade Python modules.
- Collaborated daily with international teams across Geneva, Paris and London to align model outputs with stakeholder needs.
- Built LSTM text-generation engine to produce French sustainability reports, significantly reducing editorial turnaround time.
- Deployed microservice on AWS (EC2, S3) with IaC via Terraform, maintaining sub-200 ms response SLA.

Haut-Commissariat au Plan **Jul 2023 – Aug 2023**
Data Analyst Intern *Rabat*

- Modelled multidimensional poverty indices using ARDL and ARIMA; findings featured in national socioeconomic outlook.
- Migrated one million census records to PostgreSQL and optimised queries, cutting latency by 40%.
- Automated Power BI dashboards for senior economists.

Key Skills

Modelling	Stochastic calculus, EVT, Monte Carlo, VaR, ARIMA	**Analytics & BI**	Tableau, Power BI, Grafana
Programming	Python, C++, C#, SQL, Bash	**Soft Skills**	Stakeholder communication, documentation, mentoring
Quant Libraries	NumPy, SciPy, QuantLib, PyMC		
Data Platforms	Kafka, Spark, Airflow, Docker		

Certifications

- Python for Everybody Specialization – **University of Michigan** Nov 2023
- Neural Networks and Deep Learning – **DeepLearning.AI** Dec 2023
- Prepare Data for Exploration – **Google** Apr 2023
- Python Project for Data Science – **IBM** Mar 2023

Selected Projects

Risk-Adjusted Trading Signals **2023**

- Developed XGBoost strategy incorporating volatility and liquidity factors; achieved 10% CAGR in back-test 2018–23.

FarmVision – Agritech ML Suite **2024**

- Created Python package delivering 92% accuracy in plant-disease detection; showcased to Moroccan agri-tech incubator.

Languages

Arabic (native) | French (C2) | English (C1)