

# Taoufiq OUEDRAOGO

## Quantitative Research and Machine Learning - Open to Internship, CIFRE PhD or Full-Time Roles

✉ [taoufiq.ouedraogo@icloud.com](mailto:taoufiq.ouedraogo@icloud.com) ☎ [+33 6 64 92 37 89](tel:+33664923789) in [LinkedIn-page](#) GitHub [Github-page](#) 📁 [Portfolio-website](#)

## EXPERIENCE

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### HSBC - AI Engineer

Paris, France , Sep. 2025 - Sep. 2026

- Leveraged LLM to assess incident data quality and provide actionable recommendations
- Developed and deployed an NLP tool to identify IT system failures, improving root-cause analysis
- Implemented a scoring model using temporal proximity, TF-IDF, cosine similarity to rank failure causes
- Explored new AI use cases on operational data and led training sessions to foster practical adoption
- Collaborated with abroad teammates (UK, India, Poland) to integrate AI solutions into existing systems
- **Tools:** Python, Oracle SQL Developer, GitHub, BitBucket, Jira, Jenkins

### BNP Paribas - Data Scientist & Data Engineer

Paris, France , Sep. 2023 - Aug. 2025

- Co-developed a GenAI platform industrializing AI use cases for for BNP Paribas non-EU banks
- Built 4 core GenAI features (Q&A, document comparison, information extraction, summarization)
- Developed an admin interface (frontend, backend, database) to manage users and AI use cases
- Performed Pytest unit tests and contributed to database migration and restructuring
- Designed Dataiku workflows and Tableau dashboards to monitor ALM operations and mandates
- Migrated 20+ Data Pipelines from Alteryx to Dataiku, improving efficiency and maintainability by 50%
- **Tools:** Python, Domino Datalab, Hugging Face, LangChain, Dataiku, Alteryx, Tableau, SQL Server, GitLab, Jira

### Alcatel Submarine Networks (NOKIA) - Data Scientist & BI

Nozay, France , Oct. 2022 - Aug. 2023

- Built Tableau Prep pipelines and Tableau dashboards to visualize project interdependencies
- Developed VBA-based simulations for cable manufacturing, reducing planning time by 40%
- Conducted requirements analysis, documentation and team training
- **Tools:** Python, SAS, VBA, SQL, Tableau, Tableau Prep, GitHub

## Projects / Hackathons

- **Mystery ETF Reconstruction:** ML to infer asset/ETF exposures and allocation from 105 ETFs and 14 asset classes
- **Portfolio Optimization:** Constrained minimization techniques to construct efficient Markowitz frontiers
- **Army Ministry AI Challenge - 2024:** ResNet18 vision model, explicability to analyze similar object differences
- **JP Morgan Data Challenge - 2023:** Boosted funding for an association using XGBoost and analytics
- **Rennes Data Challenge - 2023 Finalist:** KMeans clustering to optimize Enedis operational bases and reduce outages

## SKILLS

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**Quant Finance:** Time Series, Derivative Pricing, Stochastic Calculus, Interest Rates Modeling, Portfolio/Risk Management

**Deep Learning:** Neural Networks, LLMs, Transformers, NLP, Computer Vision

**Machine Learning:** Ensembles, Decision Trees, Clustering, Bayesian Stats, Dimension Reduction, Regularization

**Data Science & Analytics:** Hugging Face, LangChain, Dataiku, Alteryx, Databricks, MLFlow, Tableau, Power BI, Graphs

**Programming:** Python, Java, C, C++, R, Docker, DevOps, Databases (SQL, NoSQL, Neo4J, PostgreSQL, MongoDB, UML)

## EDUCATION

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**Panthéon-Sorbonne University** - MSc in Financial Mathematics

Paris, France , 2025 - 2026

**WorldQuant University** - MSc in Financial Engineering

Online , 2024 - 2026

**Central School of Electronics** - MEng in Big Data & AI

Paris, France , 2022 - 2025

**Compiègne University of Technology** - MEng in Computer Science

Compiègne, France , 2021 - 2022

**Gustave Eiffel High School** - Preparatory Classes

Dijon, France , 2019 - 2021