

# Taoufiq OUEDRAOGO

Looking for a 3-year CIFRE PhD in Machine Learning and Quantitative Research

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LinkedIn

Github

Portfolio

## EXPERIENCE

### HSBC - AI Engineer

Paris, France, Sep. 2025 - Sep. 2026

- Developed and deployed an NLP-driven tool to automatically identify IT system failures, enhancing root-cause analysis
- Integrated scoring model with temporal proximity and semantic similarity (TF-IDF, cosine similarity) to rank failure causes
- Leveraged a LLM to assess and comment on data quality in incident records, enabling actionable recommendations
- Explored and prototyped 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 and workflows
- 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 leveraging LLMs to industrialize AI use cases for BNP Paribas non-EU banks
- Co-built 4 core GenAI features (Q&A, document comparison, information extraction, summarization)
- Developed an administrator interface (frontend, backend, database) to manage users and GenAI use cases
- Performed Pytest unit tests on the features developed and contributed to database migration and restructuring
- Designed Dataiku workflows and Tableau dashboards to monitor ALM operations, trader mandates, Sustainable IT
- Migrated about 20 Data Pipelines from Alteryx to Dataiku, improving processing delays 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:** Used ML to infer asset/ETF exposures and allocation from 105 ETFs and 14 asset classes
- Portfolio Optimization:** Applied constrained minimization techniques to construct efficient Markowitz frontiers
- Army Ministry AI Challenge - 2024:** Used ResNet18 vision model, explicability to analyze similar object differences
- JP Morgan Data Challenge - 2023:** Used XGBoost and analytical methods to boost funding for an association
- Rennes Data Challenge - 2023 Finalist:** Developed KMeans clustering to optimize Enedis operational bases, minimizing outage response times and improving service efficiency

## SKILLS

**Quant Finance:** Time Series, Derivative Pricing, Stochastic Modeling, 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

**Big Data & Cloud:** Microsoft Azure, Azure ML, Apache Hadoop, Spark, Kafka, Hive, Snowflake

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

## EDUCATION

### Pantheon-Sorbonne University - MSc in Financial Mathematics

Paris, France, Sep. 2025 - Sep. 2026

### WorldQuant University - MSc in Financial Engineering

Online, July 2024 - Ongoing

### Central School of Electronics - Big Data & AI Engineering

Paris, France, Sep. 2022 - July 2025

### Compiègne University of Technology - Computer Science Engineering

Compiègne, France, 2021 - 2022

### Gustave Eiffel High School - Preparatory Classes

Dijon, France, 2019 - 2021

### Prytanée Militaire de Kadiogo - Scientific High School Diploma

Burkina Faso, 2012 - 2019