# **Taoufiq OUEDRAOGO**

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

#### **EXPERIENCE**

#### **HSBC** - Al Engineer Apprentice

Paris, France, Sep. 2025 - Sep. 2026

- · Developed statistical models to analyze operational activities and predict potential IT system failures
- · Developed Al-driven automation to generate business charts to make workflows more efficient
- Extended and optimized existing AI solutions leveraging internal operational data from multiple IT tools
- · Explored and prototyped innovative AI applications to support emerging business needs
- · Ensured integration of AI tools into existing systems and workflows, ensuring compatibility and scalability
- · Collaborated closely with business teams to drive user adoption and continuously improve deployed AI tools

#### BNP Paribas - Data Scientist & Data Engineer Apprentice

Paris, France, Sep. 2023 - Aug 2025

- · Co-developed a GenAI platform leveraging LLMs and RAG to industrialize AI use cases for BNP Paribas non-EU banks
- · Co-built 4 core GenAl 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
- $\bullet \ \ \text{Migrated about 20 Data Pipelines from Alteryx to Dataiku, improving processing delays and maintainability by 50\%}$
- Tools: Python, Domino Datalab, Hugging Face, LangChain, Dataiku, Alteryx, Tableau, SQL Server, GitLab, Jira

### Alcatel Submarine Networks (Nokia) - Data Scientist & BI Apprentice Nozay, France, Oct. 2022 - Aug 2023

- · Built Tableau Prep pipelines and Tableau dashboards to analyze and 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**

- AT.x.Lab: Creating a R&D collective focused on AI and advanced technologies. Innovative problem-solving approaches
- Portfolio Optimization: Applied constrained minimization techniques to construct efficient Markowitz frontiers
- Army Ministry Al 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

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

#### **EDUCATION**

Pantheon-Sorbonne University, Mathematical Engineering of Finance
WorldQuant University, MSc in Financial Engineering
Central School of Electronics, Big Data & Al Engineering
Compiègne University of Technology, Computer Science Engineering
Gustave Eiffel High School, Preparatory Classes
Prytanée Militaire de Kadiogo, Scientific High School Diploma

Paris, France, Sep. 2025 - July 2026
Online, July 2024 - Ongoing
Paris, France, Sep. 2022 - July 2025
Compiègne, France, 2021 - 2022
Dijon, France, 2019 - 2021

Burkina Faso, 2012 - 2019