

# Taoufiq OUEDRAOGO

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

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## EXPERIENCE

### HSBC - AI Engineer Apprentice

Paris, France, Sep. 2025 - Sep. 2026

- Developed statistical models to analyze operational activities and predict potential IT system failures
- Developed AI-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 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 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 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

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

## EDUCATION

**Panthéon-Sorbonne University,** Mathematical Engineering of Finance

Paris, France, Sep. 2025 - July 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