

Hadirou Tamdamba

Freelance Consultant in AI & ML(Ops) Engineering | Microsoft Certified Generative AI Engineer

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SUMMARY

AI Engineer Data Scientist Associate with 4+ years of experience in Data/AI field for strategic projects in Luxembourg, Switzerland, France, Burkina Faso. Holding a Master's degree in Applied Mathematics and Statistics and certified in MLOps, LLMOps, Cloud & Generative AI (Microsoft, DataCamp, etc.), I excel at building predictive models, performing advanced data analysis, and deploying innovative AI solutions. As a co-author of two peer-reviewed scientific publications, I am driven by uncovering strategic insights in collaborative and dynamic environments.

SKILLS

Languages: French : Native Speaker, English : B2, German : A1

Software languages: Python (Skrub, Transformers, PyTorch/TensorFlow, Keras, Scikit-learn, Prophet, LSTM, RNNs, NLTK, OpenCV, YOLO, VGG 16, Django, Pydantic, FastAPI, Pytest, Streamlit, PySpark, Polars, Pandas, NumPy, SciPy, Matplotlib, Seaborn, ...), R, SAS, SQL, NoSQL, JavaScript (Node.js, React), C++, MS Office

Developer Tools: VSCode, Git, GitHub Actions, Azure DevOps, Terraform, Jenkins, CI/CD, Shell/Bash, Huggingface, APIs, OpenAI, GPT, Gemini, Claude, LLaMA, Mistral, LangChain/RAG

Technologies/Frameworks: AWS, Azure, Kubernetes/K8s, Docker, MLflow, Hadoop, Linux/Unix, Oracle, MongoDB

Soft Skills: Autonomy, Ability to work effectively with cross-functional teams, Learn quickly and adapt to a fast-paced environment, Agility, Curiosity, Communication, Rigorous, Exceptional analytical abilities and a passion for solving challenging technical problems

KEY ACHIEVEMENTS – More details on 🌐 HadirouTamdamba

Skills | *AI, DevOps, MLOps, LLMOps, RAG, Agents, AWS, Azure, Streamlit, RShiny, Python, Flask API, Git, Next.js, HTML/CSS*

- Enterprise AI Platform: sovereign RAG + Agents + AI Governance platform (LLMOps/MLOps), FastAPI/Next.js, Kubernetes, CI/CD (<https://github.com/HadirouTamdamba/enterprise-ai-platform>)
- Sophisticated AI-powered Medical Imaging Analysis Agent built with Streamlit, AWS and Google's Gemini 2.0 Flash model (**Ongoing**) (<https://hadiroutamdamba.github.io/AI-Diagnostic-Imaging-Agent/>)
- **Publication** – Schistosomiasis Infection in Europe: A Climate-Driven Public Health Challenge (<https://doi.org/10.1016/j.clinpr.2024.100402>)
- Fraud Detection in Financial Transactions by European cardholders (<https://hadiroutamdamba.github.io/Fraud-Detection-in-Financial-Transactions-EU/>)
- Using Random Forest to prediction Airbnb Prices in European cities (<https://manonmathildehadirou-airbnb-europeancities-randomforest-pred.shinyapps.io/Shiny-Airbnb-2023/>)

PROFESSIONAL EXPERIENCE

Hale-X Luxembourg

August 2025 - June 2026 (11 months)

AI × MLOps Engineer

Luxembourg, Luxembourg

- Designed and implemented end-to-end MLOps pipelines for AI-driven healthcare applications
- Developed data ingestion and preprocessing workflows integrating multi-source medical data
- Trained, fine-tuned, and evaluated predictive and Generative AI models for clinical use cases
- Collaborated with cross-functional teams and healthcare experts to ensure compliance, scalability, and performance

DataAnnotation

November 2024 - July 2025 (9 months)

Freelance AI Trainer - Prompt Engineer

Remote, USA

- * Designed and engineered specialized prompts for applications in Data Analytics, Data Science, Statistics, and other related fields, tailoring the models to produce highly relevant and accurate results
- * Implemented debugging strategies to identify and resolve errors in AI-generated code, ensuring seamless performance and reduced error rates
- * Spearheaded the optimization of DataAnnotation workflows, enhancing overall efficiency by **25%** through process improvements and automation

Freelance — Self-Employed

January 2025 - June 2025 (6 months)

Machine Learning / MLOps Engineer

Hybrid, Swiss

- Tasked with building a production-ready machine learning system to predict credit risk for a Financial Institution
- Collaborated with cross-functional teams: Data Engineers, Data Scientists, and Business Analysts to ensure business alignment
- Designed and implemented a full-stack ML pipeline: EDA → Feature selection → SMOTE balancing → model optimization

- Conducted hyperparameter tuning using RandomizedSearchCV (XGBoost, Random Forest, Logistic Regression)
- Packaged the optimal model into a containerized Docker & FastAPI application
- Developed CI/CD workflows with Docker and GitHub Actions for automated deployment
- Deployed serverless API to AWS Lambda, secured with a custom Route 53 domain
- Built automated testing scripts with pytest and curl to validate API functionality
- **Delivered a scalable and reproducible ML solution**
- **Improved F1-score to 0.487 and AUC to 0.667 (best with XGBoost)**
- Enabled seamless deployment and maintainability with **modern MLOps best practices**

Luxembourg Institute of Health

March 2024 - August 2024 (6 months)

Data Scientist Trainee

Strassen, Luxembourg

Estimated the number of flu cases based on viral loads in wastewater in Luxembourg.

Collaborated with the Luxembourg Institute of Science and Technology on the VIRALERT project (**Publications**)

Reviewed relevant literature to support the project.

Drafted a Statistical Analysis Plan (SAP) to guide data pipeline and data analysis.

Designed impactful data visualizations to present research findings.

Managed complex datasets to ensure data integrity and quality.

Applied Machine Learning and Deep Learning Algorithms to extract actionable insights from data.

Centre MURAZ, Institut National de Santé Publique March 2020 - September 2022 (2 years 7 months)

Data Analyst - Statistician

Bobo-Dioulasso, Burkina Faso

September 2022 - Publication : Association between pesticide exposure and infertility of couple in the Boucle du Mouhoun region: A case-control study (<https://doi.org/10.1016/j.cegh.2022.101156>).

2020 - 2022: The interventional research programme for POPulations Clés en Afrique de l'Ouest - **POCAO Project**

February - December 2021: ANRS COV-13 EMuL-COVID-19 (Etude Multidisciplinaire de recherche sur la maladie COVID-19) project.

June - November 2020 : Bachelor's degree internship report and scientific article writing.

OTHER PROJECTS – More details on Projects

LICENSES & CERTIFICATIONS – Link to Certifications

Fully Automated MLOps

AI Model deployment on AWS

Evaluating AI Agents: From Metrics to Real-World Impact

Advanced Git

Career Essentials in Generative AI by Microsoft and LinkedIn

Fundamentals to Become a Machine Learning Engineer

Amazon Web Services Machine Learning Essential Training

LLMOps & MLOps Concepts

MLOps Essentials: Model Development and Integration

Introduction to Apache Airflow in Python

Machine Learning with PySpark

Introduction to Data Modeling in Snowflake

ChatGPT Prompt Engineering for Developers

Developing AI Systems with the OpenAI API

Build Chat Applications with OpenAI and LangChain

Building Intelligent Chatbots on AWS

Microsoft Azure Machine Learning Fundamentals

Working with Llama 3

Software Engineering Principles in Python

Deep Learning: Model Optimization and Tuning

Certified GDPR (General Data Protection Regulation) EU : ADVANCED

Cyber Security : PHISHING TECHNIQUES

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EDUCATION

DataCamp

AI Engineer (<https://www.datacamp.com/certificate/AEDS0013629205996>)

E-Learning, USA

365 Data Science

Professional Data Scientist (<https://learn.365datascience.com/c/8bdfd83faf/>)

E-Learning, Bulgaria

Université Rennes 2

Master's Degree in Applied Mathematics, Statistics

Rennes, France

Université Nazi BONI

Bachelor's Degree in Applied Mathematics : Statistics and Computer Science

Bobo-Dioulasso, Burkina Faso