

Merveille Christamour Akouègnon CODJO

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Third-year AI student at IFRI applying machine learning to complex data analysis, particularly in bioinformatics and healthcare. Research interests include genomic data analysis and predictive modeling.

Education

Bachelor in Artificial Intelligence Nov 2023 – Present
IFRI, Université d'Abomey-Calavi, Benin

Experience

Data Science Intern July – Aug 2025
Locapay, Benin

- Analyzed real estate data to predict housing prices using ML models (Linear Regression, Random Forest, XGBoost)
- Conducted data preparation: cleaning, feature engineering, handling missing values
- Created content for social media and communicated insights to stakeholders

Projects

Petroleum Distribution Optimization (VRP) [\[link\]](#)
Academic Project

- Solved multi-depot Vehicle Routing Problem with real-world constraints (heterogeneous fleet, variable capacities)
- Implemented MILP solution (PuLP + CBC) and Simulated Annealing metaheuristic

Chronic Kidney Disease Prediction [\[link\]](#)
Personal Project

- Analyzed 400 patients' clinical data to predict CKD presence using ML pipeline
- Identified key diagnostic factors through EDA and validated with medical literature

CHIC Hospital Chatbot [\[link\]](#)
Personal NLP Project

- Developed NLP chatbot for hospital information (location, appointments, services)
- Improved patient accessibility and reduced administrative workload

RAG Administrative Assistant [\[link\]](#)
Academic Group Project

- Built RAG system for student queries using Llama 3 (Groq), ChromaDB, with anti-hallucination features

Mini-Lib Classification [\[link\]](#)
Academic Project

- Implemented classification algorithms to organize library documents with data preprocessing pipelines

Sokoban with Search Algorithms
Academic Project

- Built Sokoban game in pure Python, compared search algorithms (BFS, DFS, A*) for solving efficiency

Other Projects: Chatbot preferences survey (ChatGPT/Claude/Gemini usage analysis), COVID-19 vaccination vs GDP analysis

Technical Skills

Programming: Python, R, SQL, JavaScript, HTML/CSS **AI/ML:** Scikit-learn, TensorFlow/Keras, Pandas, NumPy, Matplotlib, Seaborn, PuLP

Tools: Git/GitHub, Jupyter, VS Code, Google Colab, R Studio **Specialties:** NLP, Operations Research, Statistical Modeling

Leadership & Activities

AI Club (IFRI) – Active member in workshops and ML projects 2024

English Club & WICSI Girls – Technical communication and diversity advocacy 2024–Present

IndabaX Benin 2025 – Participated in ML workshops on AI innovation in Africa

Personal Development: Piano learning, pastoral studies (spiritual leadership)

Certifications

Python for Data Science (Coursera) | [View All Certificates](#)

Languages & Research Interests

Languages: French (Native), English (Learning), Spanish (Learning)

Research Interests: Bioinformatics (DNA/protein analysis), AI for African challenges, Kaggle competitions

Volunteer Work: Child advocacy for orphaned children and education access