

UCHECHUKWU EZE

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PROFESSIONAL PROFILE

I am a Data Scientist with 3+ years of experience applying machine learning, NLP, and generative AI to real-world classification, risk-scoring, and automation problems. Proficient in Python and the ML stack (Scikit-learn, LightGBM, TensorFlow), with hands-on experience in feature engineering, model evaluation, and deploying models as production services (FastAPI, Streamlit). Skilled at translating structured and unstructured data into risk classifications and decision-support tools, and communicating model methodology and findings to both technical and non-technical audiences. Contributed to 250+ data visualizations and 11+ major policy reports.

CORE COMPETENCIES

Machine Learning & Risk Classification • Python (Pandas, Scikit-learn, LightGBM, TensorFlow) • Generative AI & NLP (OpenAI, RAG) • Model Evaluation & Feature Engineering • Workflow Automation (n8n, APIs) • Data Cleaning & Validation • Dashboard Development & Data Storytelling (Power BI, Tableau) • Exploratory Data Analysis (EDA) • Team Leadership & Mentoring • Problem-Solving • Proficient in Microsoft Office (Word, Excel, PowerPoint)

SELECTED PROJECTS

West Africa Macro-Financial Risk Monitoring (Early-Warning System) | Machine Learning, Forecasting | [Demo](#) | [GitHub](#)

- Developed an API-connected macro-financial surveillance system integrating World Bank and IMF data to monitor financial vulnerabilities across 16 West African economies. Built a machine-learning-based risk-classification model using banking indicators - non-performing loan ratios, capital adequacy, and returns on assets - to score and classify countries into risk tiers, generating 2026 forecasts for early risk detection and case prioritization.

NovaPay AI - Real-Time Fraud Detection & Risk Classification | Python, LightGBM, SHAP, FastAPI | [Demo](#) | [GitHub](#)

- Built an end-to-end fraud-detection pipeline for digital-payment transactions using a chronological train/test split over 2022–2025 data; tuned a LightGBM classifier to 0.962 PR-AUC, 92% recall, and 95% F1-score, catching a fraud spike where web-channel fraud rose from 22.4% to 79.7%. Applied SHAP for case-level explainability and deployed via FastAPI with a Streamlit dashboard for real-time risk scoring and triage.

Tanara AI - ASEAN Public-Health Risk Classification | Python, Machine Learning, Streamlit | [Demo](#) | [GitHub](#)

- Built **two composite risk-classification indices** (Health Risk Index, Health Readiness Index) from a **22-year panel across 10 ASEAN countries (2004–2025)**, consolidating World Bank and public-health data to classify countries into risk and readiness tiers and generate next-year risk classifications. Deployed an interactive Streamlit app for cross-country comparison — demonstrating feature engineering, model evaluation, and clear methodology documentation.

PROFESSIONAL EXPERIENCES

Data Scientist - Project-Based Contract

10Alytics Inc. | UK (Remote)

Dec 2025 - Present

Forecasting, Data Engineering & Decision Support

- Build and compare classification, regression, and forecasting models using Scikit-learn, ARIMA, and Prophet, and communicate results through Power BI, Tableau, and Python visualizations.
- Developed predictive models using Python (Scikit-learn, TensorFlow) to forecast market trends, improving strategic decision accuracy and supporting competitive positioning.
- Conducted data cleaning and preprocessing using Python (Pandas, NumPy) and Excel, correcting missing and inconsistent data, increasing dataset accuracy by 25%.
- Designed and deployed interactive dashboards and reports with Power BI, Tableau, and Matplotlib, improving executive reporting efficiency by 35% and making insights accessible to non-technical stakeholders.
- Collaborated with cross-functional teams to translate complex datasets into actionable insights, increasing business adoption of analytics solutions
- Built forecasting models using Python (Time Series, ARIMA, Prophet), achieving precision of 85–90%, improving sales and inventory planning.
- Visualized large-scale data trends with Seaborn, Matplotlib, and Power BI, uncovering high-value opportunities that informed marketing and product strategies.
- Collaborated with cross-functional teams to translate complex datasets into actionable insights, increasing business adoption of analytics solutions

Research Associate (Data Analyst)

Agora Policy Advisory | Abuja, Nigeria

Mar 2024 - Aug 2025

Fiscal, Macroeconomic & Policy Analysis

- Built and quality-assured structured databases covering Nigeria's public debt and FAAC cost-of-collection data, cleaning and validating 200000+ quantitative records to resolve inconsistencies, improve completeness, and reduce data-retrieval time by 30% for recurring fiscal analysis.
- Conducted macro-fiscal surveillance across inflation, public debt, revenue mobilization, food security, and labour-market indicators, translating findings into policy recommendations featured in 11 major reports for government and development-policy audiences.
- Produced 250+ decision-oriented charts, dashboards, and analytical exhibits on fiscal and macroeconomic trends, supporting senior-level presentations and one of the year's most widely attended national policy forums
- Assessed fiscal sustainability across Nigeria's 36 states and the FCT using internally generated revenue, PAYE performance, FAAC transfers, and revenue-dependence indicators, identifying structural weaknesses in subnational revenue mobilization and fiscal resilience.
- Conducted inflation scenario analysis and interpreted base effects in Nigeria's rebased CPI series, highlighting risks to future price dynamics and implications for fiscal and monetary policy.
- Assessed fiscal sustainability across Nigeria's 36 states and the FCT using internally generated revenue, PAYE performance, FAAC transfers, and revenue-dependence indicators, identifying structural weaknesses in subnational revenue mobilization and fiscal resilience.

Economist - Research Intern, Contract

Preshnel, MIGI Global Research Institute | Remote

May 2022 - Feb 2024

- Conducted 72+ literature and evidence reviews; cleaned and analyzed datasets using SPSS and Excel, maintained research databases, and applied statistical and econometric techniques.
- Collaborated with senior researchers to draft reports, policy briefs, and academic outputs, ensuring high-quality, actionable insights for decision-makers.
- Applied rigorous statistical and econometric techniques to support hypothesis testing, trend analysis, and predictive modeling, contributing to informed research conclusions.

LEADERSHIP & COMMUNITY DEVELOPMENT

Africa Macroeconomic Analysts Program (AMAP)

Jul. 2025–Present

Founder/ Program lead

- Manages a pan-African community of 100+ policy and economics enthusiasts, fostering cross-country collaboration, professional growth, and internship pathways for young Africans.
- Coordinated and placed 3 scholars as graduate trainees with African Economy, a leading African Economic intelligence institute, with 40 students graduating. Also led the "Girls AI for Improved Education Outcome" workshop as a former SDGs Champion and Department Coordinator.

AWARDS & PROFESSIONAL ACHIEVEMENTS

- Mastercard Foundation Scholar, Graduate Level (2025-2027) | GAIN Award for Graduate School Applications (2025)
- Diamond ICAN Scholarship for First Class/Distinction Graduates (2025) | Top 100 Africa Future Leaders (2024)
- Tech4Africa Scholarship (2024) | Africa Economic Scholars Program - Top 3 Scholar (2023)
- Zeribe Nwosu Foundation Scholarship (2022) | Training in Data Science with AI & Machine Learning, Corporate Finance Fundamentals, and Business Risk Analysis.

EDUCATION

Sciences Po, Paris, France

Master's in Economics

Sep 2025 - Jun 2027 (Expected)

- Coursework: ML, Macroeconomics, Econometrics, Microeconomics, Financial Economics, and Computing Economics.
- **Mastercard Foundation Scholar**, Graduate Level (2025-2027)

University of Nigeria, Nsukka

B.Sc. Economics - First Class Honours (Top 1% of class)

Sep 2018 - July 2023

- **Thesis:** Econometric Analysis of Poverty, Human Capital Development, and Economic Growth using an ARDL model