

# Edward Ajayi

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## EDUCATION

### Carnegie Mellon University Africa

Master of Science in Engineering Artificial Intelligence

Kigali, Rwanda

Aug. 2024 – Present

- **Relevant Courses:** Natural Language Processing, Data Science and Applied Machine Learning
- **Specializations:** Data Science, Machine Learning, NLP

### Ekiti State University

Bachelor of Science in Computer Science

Ekiti, Nigeria

Oct. 2014 – Nov. 2019

- **Specializations:** Computer Science

## EXPERIENCE

### Research Intern - Business Automation (Agentic AI)

CMU-Africa

Kigali, Rwanda

Jun. 2025 – Aug. 2025

- Developing and prototyping an agentic AI framework to automate complex business workflows.
- Researching and implementing AI safety protocols and robust LLM reasoning for ethical alignment and deployment.
- Analyzing agent performance to establish benchmarks for human-in-the-loop oversight and develop explainability metrics to support transparent corporate accountability.

### Client Service Officer

Stanbic IBTC Bank

Lagos, Nigeria

Dec. 2021 – Jul. 2024

- Leveraged data-driven insights to cross-sell over N400M in assets, enhancing client trust and digital adoption by 25%.
- Managed client relationships, identifying service gaps to improve operational efficiency.

### Operations Analyst

PricePointe

Lagos, Nigeria

Sep. 2021 – Dec. 2021

- Analyzed pricing strategies with SQL and Python, boosting revenue by 20% while maintaining customer loyalty.

## RESEARCH AND PUBLICATIONS

### Multilabel ML Approach for Mental Health and Cyberbully Detection [Paper]

Under Review

- Compared traditional ML models (e.g., SVM, Random Forest) and LLMs to classify emotions and harmful content from social media data.
- Used LLM explanations to improve model transparency and interpretability.
- Analyzed trade-offs in speed, depth, and explainability for building robust, trustworthy conversational AI.

## PROJECTS

### AI Workflow Automation Agent | Python, LangChain, FastAPI, Google Sheets API, SMTP

Jul. 2025

- Built an autonomous agent that interacts with a Google Form-linked Sheet to process business requests.
- Sends email notifications to approvers, who review AI-generated content via a custom dashboard.
- Integrated a QA bot to monitor and update sheets based on approvals and feedback.

### Multichannel HR Assistant Bot (In Progress) | RAG, Python, Slack API, FastAPI, LangChain, OpenAI

Ongoing

- Developing a Retrieval-Augmented Generation HR assistant accessible via Slack, email, and web.
- Supports employee queries using secure internal document retrieval and conversational response generation.

### AI-Powered RAG Chatbot - Kigali Smart City Guide | Python, NLP, Neo4j, LangChain, Llama

Nov. 2024

- Built a Retrieval-Augmented Generation chatbot, ensuring safe and context-aware responses for urban use cases.

### Stock Index Financial Data Analysis - DJIA | Python, BeautifulSoup, Yahoo Finance API, Seaborn

Dec. 2024

- Analyzed DJIA trends with dimensionality reduction, explaining 95% of variance for robust financial insights.

## TECHNICAL SKILLS

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**Programming:** Python (Intermediate), SQL (Intermediate)

**Data Science & Machine Learning:** Pandas, NumPy, Matplotlib, Seaborn, Scikit-Learn, PyTorch

**Natural Language Processing:** Langraph, OpenAI Agents SDK, NLTK, Sentiment Analysis, LLMs, Prompt Engineering, Retrieval Augmented Generation

**Tools:** Jupyter, MS Excel, BeautifulSoup

## SOFT SKILLS

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Critical Thinking, Problem-Solving, Collaboration, Communication, Adaptability

## TRAINING

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### Learner, Natural Language Processing Specialization

Online

*Coursera, DeepLearning.AI*

*May 2025*

- Completed 4-course specialization covering NLP with classification, sequence models, attention, and transformers.

### Learner, AI Agents Course

Online

*Hugging Face*

*Mar, 2025 – May, 2025*

- Studying agent design and safety fundamentals to build robust AI systems.

### Learner, AI Safety Atlas

Online

*AI Safety Atlas*

*Mar. 2025 – May, 2025*

- Exploring technical AI safety topics, including alignment and risk mitigation strategies.

### Remote Data Science Intern

Remote

*Ingressive For Good & DataCamp*

*Apr. 2023 – Sep. 2023*

- Completed DataCamp Data Science Career Track, mastering data analysis and ML through 7 projects.

## VOLUNTEERING/LEADERSHIP

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### President, CMU-Africa Research Club

Kigali, Rwanda

*Carnegie Mellon University Africa*

*Jan. 2025 – Dec. 2025*

- Launched a newsletter and research clusters to foster AI safety and NLP collaboration.
- Increased student research participation through workshops and research club seminars.
- Organized 4+ seminars to boost student publications by 80% by 2025.

### IEEE Student Member

CMU-Africa

*Institute of Electrical and Electronics Engineers*

*Feb. 2025 – Present*

- Collaborating with IEEE members to push research initiatives among CMU Africa Research Club members.

## CERTIFICATIONS

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- Microsoft Certified Azure Data Scientist Associate - [View](#)
- Microsoft Certified Azure Data Fundamentals - [View](#)
- DataCamp Python Data Associate - [View](#)

## HONORS AND AWARDS

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- Mastercard Foundation Scholarship, Carnegie Mellon University Africa
- Federal Scholarship Board Award for Undergraduates, Ekiti State University