






Aaron Ontoyin Yin


SE, AI Engineer, Electrical and Electronics Engineering Student

Passionate AI Engineer with Expertise in Deep Learning, Gen AI, Data Science, Web Development, and Robotics. Mathematics Olympiad Participant and 3+ Years of Practical Experience in AI. Proficient in Python, many Software Stacks, and Statistical Methods. Enthusiastic about Solving Complex Problems and Innovating in the Field of Artificial Intelligence.

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TECHNICAL SKILLS

Machine Learning

TensorFlow, PyTorch, Scikit-Learn, Xgboost, Imblearn, etc

Artificial Intelligence

Deep Learning, Recurrent Neural Networks, Transformers, Natural Language Processing; Large Language Models/Computer Vision, Sentiment Analysis; Computer Vision; Object Detection, Image Segmentation, Image Classification

Cloud Engineering

Microsoft Azure, Google cloud

Data Engineering Data Mining, MySQL, PostgreSQL, Big query, EDA

Visualization Tools

Ms Excel, Matplotlib, Seaborn, Plotly/Plotly Dash, echarts.js

Web/Software Development

Streamlit, Dash, Django, Flask, Fastapi, HTML/CSS/Bootstrap/Tailwind CSS, js, Docker, Git/Github

Programming Languages

Python, SQL, JavaScript, C/C++, MATLAB

Scripting

Python, shell

Quantum computing

Quantum theory, circuits, algorithms, cirq, classic



EXPERIENCE

AI Engineer

Vela Partners, San Francisco - USA

01/2024 - Present

Remote

Vela Partners is the world's first product-led and AI-powered venture capital firm.

- Developed robust APIs utilizing FastAPI to facilitate smooth communication among micro services.
- Designed and implemented synthetic customer chatbots, enhancing user engagement.
- Spearheaded AI-driven startup discovery, optimizing project outcomes.



GENERAL SKILLS

Problem-solving Research

Team work Analytical skills

Communication

Time management

Documentation

Critical Thinking

Attention to detail

Adaptability

Initiative

Tutoring/Teaching



EDUCATION

Software Engineering

ALX Africa

11/2022 - 01/2024

Online

Courses

- System Administration, Backend, Frontend, Databases, Research, Agile Development, DevOps, etc.



EXPERIENCE

Machine Learning Researcher, Intern

Suprcede, UK London

09/2023 - Present

Remote

Suprcede works with CEOs and founders to integrate and develop unique, efficient AI solutions for their businesses.

- Contributed to crafting tailored language models utilizing pre-trained Large Language Models (LLMs) like OpenAI's Generative Pre-trained Transformers (GPTs).
- Carried out research about the design of the company's SaaS product for the best experience.
- Helped in the database structuring for the LLM and SaaS platform interactions.

ML/AI Assistant Lead Engineer

Ideation Axis

05/2024 - present

Greater Accra, Ghana

Provide full-stack technical support to help turn ideas into reality.

- Instruct interns on AI concepts.
- Support the leadership of AI-related projects.

Team Lead

Team Tesla, Xavier Robotics Club

08/2020 - 09/2021

Wa, Ghana

A robotics club under the Ghana Robotics Academy Foundation

- Taught robotics concepts to club members.
- Led development of competition tactics.
- Procured ev3 kits.

Vice President

Aaenics UMaT

01/2024 - Present

Tarkwa, Ghana

A multifaceted electronics and robotics club for connecting and training innovators

- Teach microcontroller and AI classes.
- Guide newbies and beyond on programming fundamentals.
- Take part in club administrative activities.



PROJECTS

Customer Churn Prediction

- Using predictive modeling, I developed a customer churn prediction system using machine learning models on IBM's telco customer churn data. The models used were logistic regression, random forest, SVM, KNN, naive bayes, and XGBoost.
- I implemented a modular structure for efficient experimentation. I saved the most optimal models on precision, recall, and a balance between the two as pickle files, which were used for prediction in a Streamlit web app I created.
- Users could choose to prioritize recall, precision, or balance in the deployed Streamlit app.

Electrical and Electronics Engineering

George Grant University of Mines and Technology

1/2022 - Present

Tarkwa, Ghana



CERTIFICATES

Software Engineer

ALX Africa: Low level programming, DSA, Web Dev, DevOps, Systems Administration

Drillbotics Research

SPE, DSATS: Research skills, python programming, data processing

AI21 Labs Hackathon

AI21 Labs: Working with LLMs, python programming, working with APIs

Ghana Math Olympiad

MISE Foundation: Mathematical skills

Team Tesla Lead

Xavier Robotics Club: Robotics, leadership skills

Quantum Computing

The Coding School [MIT]: QxQ introduction to quantum computing



ORGANIZATIONS

IEEE (08/2023 - Present)

Student member

SPE (08/2023 - Present)

Student member

Advanced ML Pipeline for Network Intrusion Detection

- Developed a machine learning pipeline with feature extraction, dimensionality reduction, and SVM classification.
- Used Random Forest for feature extraction and PCA for dimensionality reduction.
- Implemented an SVM classifier with optimized kernel functions and hyperparameters. Integrated the pipeline using scikit-learn's Pipeline object for efficient and consistent data transformation.
- Evaluated pipeline performance using accuracy, precision, recall, F1 score, ROC curve, and AUC-ROC. Enabled probability estimation in SVM and analyzed the impact of varying decision thresholds on performance.

Drillbotics Research

- A research competition among universities to solve drilling problems organized by DSATS-SPE. My team was the best in the Directional Drilling Section in 2023.
- I used our research results to create a complete Python package for the purpose of building a drilling simulator, utilizing my expertise in the language.
- I created an interactive interface with Streamlit to keep an eye on the drilling operation and analyze the data that came from it.

OSAD API (Object, Speech and Audio Detection)

- Built a test-driven, packed, and robust API that provides endpoints for converting speech to text and vice versa and object detection within images.
- The API securely manages user authentication with session tokens and password resets through email.
- Used Flask for the API development, Torch Vision's fasterrcnn_resnet50_fpn_V2 model for object detection, SpeechRecognition for speech-to-text and pyttsx3 for text-to-speech. I managed audio formats with PyDub.

EASEChaos

- Together with other students, we built an app that extracts the timetable for any class from a general timetable that is always released by our university.
- I led the writing of the python script responsible for the extraction given and program and level. I also helped built the fronted interface using streamlit.
- I made use of pandas and openpyxl for the data manipulation.

Mini Attention

- Developed a novel attention mechanism from scratch using Pytorch's graphing system and tensors.
- Trained an English to French translator using this custom attention module.

Microsoft Learn Student Ambassadors (01/2024 - Present)

Student Ambassador

GDSC (03/2022 - Present)

Student member



INTERESTS

Coding

Watching movies/series

Teaching/Tutoring

Teaching/Tutoring



REFEREES

Mensah Sitti

"Lecturer, Department of Computer Science and Engineering, University of Mines and Technology "

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NOTE

- **Additional projects:** I have worked on several other projects that are not listed here. I am happy to discuss these in more detail during an interview.
- **Referees on any project or experience available on request.**