

JOSHUA OLUWATIMILEYIN SALAKO

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<https://joshsalako.github.io>

OBJECTIVE

To advance the frontiers of Artificial Intelligence (AI) and Machine Learning (ML) by conducting impactful research that addresses critical societal challenges in health, education, and sustainable development. I aim to contribute to the development of efficient, interpretable, and inclusive AI systems. My long-term goal is to excel as a research professor, fostering innovation, and mentoring the next generation of AI scholars

EDUCATION

AUG 2019 - AUG 2024 Federal University of Agriculture, Abeokuta (FUNAAB), Nigeria
Bachelor of Engineering (BEng) in Electrical and Electronics Engineering
C.G.P.A: 4.40/5.00

TECHNICAL SKILLS

- Data Science and Machine Learning (Scikit Learn, TensorFlow, PyTorch, Computer Vision, NLP)
- Experienced in data collection, preprocessing, and analysis using Python and MATLAB
- Skilled in collaborative research, peer-reviewed writing
- Experience in embedded systems and automation
- Project management and supervision
- Python programming (Pandas, NumPy, Matplotlib, Beautiful Soup, Streamlit)
- Experience in mobile development using Flutter
- Experience in backend development and frameworks including Django, Flask, and FastAPI
- Proficiency in Google Workspace
- Soft Skills

EXPERIENCE

Jan 2024 - Oct 2024 **AI Lead**, NUTEC (a subsidiary of Nigerian Union of Engineering Students Association (NUESA), FUNAAB Chapter)

- Conceived and executed a comprehensive AI education initiative, empowering engineering students with in-demand skills in AI, ML, and Data Science
- Voluntarily developed and taught curriculum-aligned workshops
- Fostered a collaborative community through weekly meetups, encouraging peer-to-peer learning, and industry-relevant project development
- Culminated the program with a hackathon, assessing student progress, and recognizing outstanding projects

Oct 2024 **Poster Presenter**, Data Science Nigeria (DSN) AI Bootcamp 2024
Participated in the DSN AI Bootcamp and presented a poster titled "Fish-NET: Advancing Aquaculture Management through AI-Enhanced Fish Monitoring and Tracking" on Computer Vision

Aug 2023 - Nov 2023	AI Researcher (Intern), ADA Global Concept <ul style="list-style-type: none"> Co-authored a peer-reviewed research paper on deep learning methodologies, published in a reputable journal Designed, implemented, and evaluated multiple deep learning models using TensorFlow and PyTorch, achieving state-of-the-art performance on the Nigerian Catfish Dataset Conducted comprehensive literature reviews, identifying knowledge gaps and contributing novel insights to machine learning
Aug 2023 - Dec 2023	Engineering Project Supervisor (Intern), Ardova Plc Actively involved in the supervision and development of several projects on-site which include; <ul style="list-style-type: none"> Decommissioning of 20 oil tanks (PMS, AGO, and ATK) and a base oil plant Construction and fabrication of 9 base oil tanks from foundation to priming and installation Installation of automated valves, induction motors, and earthing system of the petroleum distribution facility Construction of a 20 thousand metric tonne LPG storage facility (largest in West Africa)
Feb 2023 - Apr 2023	Electrical Engineer (Intern), Drugfield Pharmaceutical Limited <ul style="list-style-type: none"> Collaborated with the cross-functional Engineering team to design, install, and integrate complex control panels for a cutting-edge, state-of-the-art manufacturing plant Spearheaded the maintenance and upkeep of sophisticated electrical equipment and systems, guaranteeing 99%+ uptime and reliability across the entire manufacturing facility
May 2022 - Aug 2022	Data Analyst, Techtrend Africa <ul style="list-style-type: none"> Designed and deployed a scalable recommender system using Python, Scikit-learn, and collaborative filtering, achieving a 15% improvement in recommendation accuracy and a 20% increase in user engagement. Developed and implemented a time-series forecasting model utilizing ARIMA, enhancing demand planning accuracy by 25%, reducing inventory costs by 12%, and improving supply chain efficiency
Apr 2022 - May 2022	Training Facilitator, DSN Volunteered to facilitate AI Invasion 2022, a free AI training class, mentoring over 150 students on the basics of Artificial Intelligence and practical applications
Jan 2022	Student Tutor, NUESA, FUNAAB Chapter Volunteered as a tutor for lower-level students, fostering academic growth and confidence through group workshops
Aug 2021 - Oct 2024	Core Team Member, FUNAAB DSN Artificial Intelligence Student Club <ul style="list-style-type: none"> Played a pivotal role in shaping the club's vision and strategy, driving student engagement, and cultivating a vibrant community of AI enthusiasts

- Conceptualized and executed innovative programs, workshops, and events that enhanced members' technical skills, industry knowledge, and networking opportunities

PUBLICATIONS AND MANUSCRIPTS UNDER PREPARATION

Salako, J., Ojo, F. and Awe, O. O. (2024). Fish-NET: Advancing Aquaculture Management through AI-Enhanced Fish Monitoring and Tracking, *AGRIS on-line Papers in Economics and Informatics*, Vol. 16, No. 2, pp. 121-131. ISSN 1804-1930. DOI 10.7160/aol.2024.160209

Awe, O. O., **Salako, J.**, Rodrigues, P. C., Dukhi, N., Dias, R. (2024). A Comparative Exploration of SHAP and LIME for Enhancing the Interpretability of Machine Learning Models in Obesity Prediction, *Practical Statistical Learning and Data Science Methods*, pp. 253-281. Springer. DOI: 10.1007/978-3-031-72215-8_11

Nuga, O. O., Amusa, K. A., Olanipekun, A. J., Matthew, S., Owusu, S. B., **Salako, J. O.**, Onabanjo, P. O., Lawal, A. O. and Abdulkareem, S. O. (In Press). Multi-lingual contextual audio transcription and translation to selected native languages

Nuga, O. O., Olanipekun, A. J., Olude, M. A., Matthew, S., Ayinde, J. A., Onabanjo, P. O., **Salako, J. O.** and Owusu, S. B. (In Press). Web-Based Predictive Machine Learning Model for Livestock Disease Prevention

Nuga, O. O., Olude, M. A., **Salako, J. O.**, Amusa, K. A., Olanipekun, A. J., Matthew, S., Owusu, S. B., Onabanjo, P. O. and Adeoye, A. O. (In Press). A Real-Time Scalable Mobile Application for Veterinary Services

SCHOLARSHIPS AND AWARDS

Recipient of the prestigious Senator Olamilekan Yayi Undergraduate Scholarship Award (2023/2024) for outstanding academic achievement

AWS AI & ML Scholarship - received a scholarship for Udacity AI Programming with Python Nanodegree program (worth \$4,000)

Google Solution Challenge - awarded a *Certificate of Participation* for submitting a solution in the 2022 and 2024 Solution Challenge hosted by Google Developer Student Clubs (GDSC)

Certificate of Appreciation for voluntary service offered to NUESA

Certificate of Excellence as Media Coordinator of the Redeemed Christian Church of God (RCCG), Omega Parish

INDEPENDENT COURSEWORK

AI Programming with Python Nanodegree		Data Science with Python	
AWS ML Foundations	Udacity	ML Fundamentals with Python	Datacamp
Machine Learning Fundamentals			
Deep Learning Specialization	Coursera		

INDEPENDENT PROJECTS

Computer Vision - [CLI Image Classifier Application](#)

- Trained a deep neural network on a user-defined dataset of images, saving the model as a checkpoint for future use

- Deployed the model to make real-time inferences on image classes

Natural Language Processing (NLP) - [English to Yoruba Machine Translator](#)

- Fine-tuned a Multilingual Transformer Model (MT5) for English-to-Yoruba Neural Machine Translation, achieving a BLEU score of 12 on the Menyo-20k_MT dataset
- Implemented Data Preprocessing Techniques including text normalization and sentence filtering, showcasing an understanding of data quality's impact on model performance
- Developed Custom Dataset and Dataloader Classes using PyTorch to handle sequence-to-sequence translation data efficiently

Mathematics - [Pi Digits Generator Application](#)

- A web-based application that generates π to very large number of decimal places

Time Series - [Currency Foreign Exchange Rate Prediction](#)

- Web-based application that uses ARIMA and Prophet model to forecast foreign exchange rates

Computer Vision - [AI-Generated Image Detector](#)

- Developed a model that detects an AI-generated image from real human-created images

Machine Learning - [Nollywood Movie Recommender System](#)

- Developed a recommendation model to provide personalized movie suggestions to Nollywood fans

Mobile Development - [Mobile Veterinary Telemedicine Application](#)

- Designed and developed a user-centric mobile app connecting pet owners with local veterinary professionals using Google Maps API and Flutter
- Implemented secure user authentication and authorization
- Built an intelligent appointment scheduling system with real-time availability and a customizable notification system

INTERESTS

Languages: English, Yoruba (Native)

Extracurriculars: Photography

REFEREES

Available on request