

# OLALEKAN AKINBOSOYE OKEWALE

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## RESEARCH INTEREST

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Analyzing the Utilization of Artificial Intelligence: Machine Learning, Deep Learning and Natural Language Processing, Methodologies, Data, and System Approaches.

## EDUCATION

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**MSc. in Computer Science**, University of Ibadan, Ibadan 2018 – 2022  
CGPA 5.8 / 7.0

**MSc. in Electrical Electronics Engineering**, University of Ibadan, Ibadan 2012 – 2014  
CGPA 5.4 / 7.0

**BTech. in Computer Science and Engineering**, Ladoke Akintola University of Technology, Ogbomosho 2004 – 2009  
CGPA 4.12 / 5.0

## RESEARCH EXPERIENCE

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### Co-Lead Investigator

*CEUR Workshop Proceedings* ([ceur-ws.org](https://ceur-ws.org))

Evaluation of Vader and MultiLingual Sentiment Analyzers for Opinion Analytics using Graphical Illustrations 2022

- **Collaborator:** Taiwo Olaleye, Peter Ugege, **Olalekan Okewale**, Olatunji Akinade
- **Summary:** We evaluate the performances of the Vader-based lexicon sentiment analyzer and the MultiLingual sentiment analyzers through an opinion mining analytics of football tweets. Two tweet corpus of 1000 tweet each, comprising of 141371 and 127072 from the hashtag #NGRTUN and #GNBNGA respectively. It was shown that MultiLingual analyzer works with tweets of shorter phrases and return unigram of local dialects than the Vander approach.
- **Duties:** Reviews literature; compare architectures algorithms - create charts; writing.

### Co-Lead Investigator

*Computational Intelligence in Healthcare* ([CRC Press](https://cricpress.com))

Evaluation of Deep Image Embedders for Healthcare Informatics Improvement using Visualized Performance Metrics 2023

- **Collaborator:** Taiwo Olaleye, **Olalekan Okewale**, I. Solanke, Alomaja
- **Summary:** The study deploys five deep image embedders to extract feature vectors from X-ray and CT scan image-signals of both positive and negative cases of Covid-19, thereby employs machine learning algorithms (MLP deep, SVM and Random forest) to build an intelligent diagnostic model on patterns recognized from the feature vectors, to predict the Covid-19 status of new X-ray or CT scan images inputs. The MLP deep learner returned best result on the VGG16 and VGG19 embedded datasets
- **Duties:** Reviews literature; compare architectures algorithms - create tables and charts; writing.

### Co-Lead Investigator

*5th Information Technology for Education and Development (ITED)* ([IEEE](https://ieeexplore.org))

An ensemble statistical evaluation of medical image embedding with SqueezeNet neural network 2022

- **Collaborator:** Solanke Ilesanmi, Agbaegbu JonhBosco, Wilson Ahiara, Janet Akiode, Uchenna Udeani, Taiwo Olaleye, **Olalekan A Okewale**
- **Summary:** We use the SqueezeNet deep embedder on computerized tomography scan signals for feature extraction of pneumonia attributes. An ensemble statistical tool is used for the evaluation after the feature selection of significant attributes by analysis of variance. To answer research question that seeks to discover most significant data feature, experimental result returns an external data attribute as one with the most discriminative information for pneumonia detection. An interquartile range of 40000 to 240000 with a dispersed probability density function in the second quartile also indicates a positive case of pneumonia medical condition.
- **Duties:** Reviews literature; compare architectures algorithms - create tables and charts; writing.

## Lead Investigator

A time-stamped and multi-class Ekman mood theory analysis of *Octogenarians*

*in review (preprint)*

2022

- **Collaborator:** Olalekan Okewale, Temitope Abioye, Emmanuel Ofoegbonna, Taiwo Olaleye
- **Summary:** We employs the Paul Ekman's emotional theory to analyze a time-stamped real-time opinions of Octogenarians to classify their emotional mood within a timeline thereby unravelling the spontaneity of their moods during the course of using mobile health applications. Experimental result returned Surprise, Joy and Fear as the only classes of Ekman's postulations exhibited by the Octogenarians with Surprise as the most dominant throughout the timeline despite being exhibited by only four respondents out of the entire population.
- **Duties:** Reviews literature; compare architectures algorithms - create tables and charts; writing.

## HONORS, AWARDS & RECONGNITION

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**PAN African University of Life and Earth Sciences Institute Support Staff 2002** Won the best performing staff of the year as a result of dedication and prompt action to resolving problems within the entire University.

## TALKS AND CONFERENCES

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**2023 Indabax Nigeria, Human Centric AI for Digital Economy** Learn how the AI revolution will free humans up for more creative and intellectually fulfilling activities.

**2022 International Conference on Computational Linguistics and Intelligent Systems Poland** Delivered oral presentations of my accepted paper "*Evaluation of Vader and MultiLingual Sentiment Analyzers for Opinion Analytics using Graphical Illustrations*"

**2022 International Workshop on Computational Special Functions and Their Applications Online** Learn how to use theoretical and computational aspects of special functions & their applications in other branches of Science with MATLAB.

**2022 International Artificial Intelligence Workshop on Recommender Systems Online** Learn how to use machine learning and deep learning to develop and end to end recommender system as well as the deployment by AI innovation and Business Development

## TECHNICAL STRENGTHS

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<b>Machine Learning</b>	Scikit-Learn, TensorFlow, Pytorch, OpenCV, NLTK.
<b>Data Science</b>	SQL, Pandas, Matplotlib, Seaborn, Folium, Plotly, Tableau, PowerBI, Streamlit.
<b>Software Engineering</b>	Java, Python, FastAPI, NodeJs, Django, GraphQL, PHP/MySQL, Docker, CI/CD.
<b>Others</b>	Open-Source Development, Web Scraping, Cloud Computing with GCP, AWS.

## WORK EXPERIENCE

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### ICT Officer

**Pan African University Life and Earth Sciences, University of Ibadan**

Jan. 2021 – May 2023

- Responsible for IT Infrastructure and Maintenance of Computer Systems.
- Keenly monitor and resolve any conflicts in new implemented software, while analyzing alternative configurations and implementing effective solutions
- Work closely with the product team throughout solution architecture design and solution implementation activities
- Developed and led large-scale technology initiatives for long-term strategic plans and solutions.
- Ensure standardization and Standard Operating Procedures (SOPs) in place for the Institute office with regards to ICT.

### Adjunct Lecturer

**Federal University, Oye-Ekiti, Nigeria, Polytechnic Ibadan Center**

Jan. 2022 – Apr. 2023

- Lecture undergraduate students on digital signal processes, simulation and modelling, microprocessor and system interfacing software engineering and its practices.
- Utilize curricula that reflect the diverse educational, cultural, and linguistic backgrounds of the students served.
- Utilize professional development opportunities to increase computer science knowledge and pedagogical skills

### Software Engineer

### **Opal System Solutions, Ibadan, Oyo State, Nigeria**

July 2019 – Dec. 2020

- Processed support requests from customers and employees through troubleshooting and debugging software in the production cycle.
- Develops different machine learning models and deployed to Heroku platform using Streamlit and Flask for testing.
- Utilized SQL, C#, ASP.NET, JavaScript, HTML5, CSS3, MSSQL, and Angular to provide a modern standard-based solution into common business challenges.
- Development of mobile and web application for a financial institution.

### **Full Stack Software Developer**

#### **VNICOMS Communication Limited, Magboro, Ogun State, Nigeria**

July 2018 – July 2019

- Develop mobile application using Android Studio.
- Provide information technology training to international certification
- Instruct people on how to design interactive web pages using JavaScript, HTML, CSS, Angular and dot net Framework
- Performed key assigned tasks, including creating a project plan, gathering requirements from business units or users, and documenting technical and business requirements

### **Director of Microsoft Education**

#### **The Emmakulate Limited**

Aug. 2014 – June 2017

- Monitor and assign resources appropriately to streamline project efficiency and maximize deliverable outputs
- Analyze project progress and, when necessary, adapt scope, timelines, and costs to ensure that project team adheres to project requirements
- Redesigning of the computer network architecture across all the partners schools (25) in Nigeria.
- Designing and implementing new network solutions and/or improving the efficiency of current networks across all the partners school (25) in Nigeria
- Installing, configuring and supporting network equipment including routers, proxy servers, switches, WAN accelerators, DNS and DHCP
- Instruct people on website development using PHP/MYSQL, ASP.NET, Oracle, and Microsoft and also administer candidates for a professional examination.
- Instruct people on statistical packages like SPSS, SAS and Accounting packages (Peachtree, Turbo cash)

## **VOLUNTERING AND COMMUNITY SERVICES**

- **DevOps and Cloud Engineer, Hamoye Artificial Intelligence** Led the development, implementation of a project on employee attrition using machine learning algorithm and deployment on streamlit cloud server. (2023)
- **Community Lead, Artificial Intelligence Saturday Ibadan, University of Ibadan** Organized data science technical & soft-skills training impacting over 3000 students to bridge the gap between learning and becoming industry-grade. Personally taught more than 400 students on various topics across machine learning, data science, and technical skills needed to function in an industrial setting. (2022 - 2023)
- **Data Analyst Mentor, Opal System Solutions Programme** Prepared an immersive, intermediate-to professional curriculum for both male and female mentees across Western Africa and mentored them, with 90% of my mentees now working professionally across the data analyst sphere. (2020 - 2021)

## **PROFESSIONAL AFFILIATES**

- Registered Engineer with Council for Regulation of Engineering Practice in Nigeria. (COREN)
- Member of Nigeria Computer Society (NCS)
- Member of Computer Professional of Nigeria (CPN)
- Member of International Society for Knowledge Organization (ISKO-WA)
- Member Institute of Electrical Electronics Engineering (IEEE)
- Member of Professional Management Institute (PMI)