ILORI, OLUWASEUN OLUJIDE

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EDUCATION

MSc Computer Science (AI Specialization) *[Jan 24 - Jun 26]*
Babcock University, Nigeria
Thesis - Developed a robust YOLOv12-Nano–based malaria detection system addressing cross-laboratory domain shift in microscopy images. Incorporated Grad-CAM++ explainability heatmaps to improve model interpretability. Demonstrated that mixed-domain training improves generalization and achieved state-of-the-art performance.

B.Eng, Electrical and Electronics Engineering – *second class upper (4.06 / 5.0) [2015 –2020]*
University of Uyo, Nigeria
Project – Developed a Raspberry Pi 3B-based surveillance system with motion detection using a camera, passive infrared sensor, RFID reader, and USB modem. If an intruder is detected without a valid RFID tag, the system sends photos to the owner's email and initiates a phone call for immediate alert. Link

RESEARCH INTERESTS

Computer Vision, Edge AI, Machine Learning

WORK EXPERIENCE

MyLane.AI *[JUL 24 – Present]*
Data Scientist

- Analyzed U.S. labor market trends using job postings data and official sources (BLS, Census.gov, etc) to deliver actionable insights.
- Developing a forecasting model to predict workforce growth across healthcare specialists.
- Aided the development of a compensation parser to accurately extract and standardize wage information from job listings.
- Performing Data Cleaning, Exploratory Data Analysis and sharing insights.

TalaNanu *(Contract)* *[May 23 – Jun 24]*
Computer vision engineer

- Trained and deployed fine-grain image classifier, achieving an accuracy of 98%.
- Optimized OCR pipeline thereby reducing inference latency from more than a minute to less than 20 seconds.
- Implementing computer vision algorithms to find subtle differences in product images.
- Researching and utilizing recent advances in salient object detection.
- Model training and deployment using docker and FastAPI on GCP

Zummit Africa *[Nov 21 -Mar 22]*
Deep learning Intern

- Led a team on an emotion detection project from predictive modeling using transfer learning to deployment.

- Tutored team members who didn't have experience with deep learning.

Freelance Machine Learning Engineer *[Sep 21 - Nov 21]*
- Conducted an asthma prediction research project by comparing machine learning and deep learning algorithms such as XGBoost, KNN, 1D-CNN, and MLP.

Hamoye *[Jul 20 - Dec 20]*
Data Science Intern
- Data cleaning and exploratory data analysis tasks.
- Predictive Modelling using linear regression, logistic regression, random forests, XGBoost and TensorFlow.
- Collaborated with fellow interns to work on open-source projects.

TEACHING EXPERIENCE

Babcock University Centre for Open Distance and E-Learning (BUCODeL)[Oct 25- Present]
E-Tutor
- Introduction to Machine Learning
- Linux System Administration
- C Programming
- Data Management

Babcock University - Department of Computer Science
Teaching Assistant - Database Systems Design, Implementation and Management
- Conducted practical SQL sessions.

COMPETITIONS

MathWorks MiniDrone Competition Winners(2022), Virtual Round - Video *[Jun 22 – Oct 22]*
- We came first out of 330+ Teams in the EMEA Region.– Team Certificate | Link
- Another team member and I were responsible for developing the image processing algorithm.

PUBLICATIONS

1. Wumi Ajayi, Oluwaseun Ilori, Oluwatayofunmi F Durodola. Performance Evaluation of YOLOv12 Models for Malaria Parasite and White Blood Cell Detection. Asian Journal of Research in Computer Science, 2026, 19 (4), pp.44-54. ⟨hal-05593373⟩

2. Nzenwata U. J., Ilori O. O., Tai-Ojuolape E. O., et al. Explainable AI: A Systematic Literature Review Focusing on Healthcare. Journal of Computer Sciences and Applications. Vol. 12, No. 1, 2024, pp 10-16. https://pubs.sciepub.com/jcsa/12/1/2

3. Oluwaseun Olujide Ilori, Kingsley Monday Udofia and Unwana Ubong Iwok. Design and Implementation of a Smart Surveillance System. *Communications on Applied Electronics* 7(33):8-12, March 2020

FEATURED PROJECTS

Malaria parasite detector - Code

- Trained an object detection model to count malaria parasites and white blood cells.
- Developed and deployed a custom API for prediction using FastAPI and Docker on GCP.

Monocular Depth Estimation- Code

- Developed a custom ResNet18 encoder-decoder model with skip connections for depth estimation.
- Trained the model on the Nyu-v2 dataset.

Automatic license plate reader for Nigerian plates - Demo

- Learned how to properly collect and process data for object detection tasks.
- Trained a simple object detector.
- Developed a custom optical character reader.
- Developed a custom annotation tool for data extraction and processing.
- Trained and used a regression model to adjust threshold values in real-time.

TECHNICAL SKILLS

Programming & Scientific Computing: Python, PostgreSQL, MATLAB/Simulink, NumPy, Pandas, Statsmodels, Prophet, Web Scraping

Machine Learning & Computer Vision: PyTorch, TensorFlow, Keras, Scikit-learn, OpenCV, Spacy, NLTK, Gensim

MLOps, Cloud & Workflow Tools: MLflow, Docker, FastAPI, Git, Google Cloud Platform, Azure ML Studio

Data Visualization & Analytics: Looker Studio, Matplotlib, Plotly

CERTIFICATES

Grant Writing Class - Link *[Jun 25]*
Research, Innovation and International Cooperation (RIIC)- Babcock University

Deep Learning With PyTorch (OpenCV.org) - Link *[Jan 24]*

DeepLearning.AI – Convolutional Neural Networks in TensorFlow - Link *[Oct 21]*

DeepLearning.AI – Introduction to AI, ML and DL - Link *[Sep 21]*

Machine learning with Python - Link *[Jul 20]*
Took an introductory course on machine learning at Cognitiveclass.ai.

Computer vision for faces - Link *[Oct 18]*
Took a course on computer vision for faces at Big Vision LLC (learnopencv.com). It covered image processing, Opencv, Dlib, machine learning and deep learning. I developed face recognition software as my capstone project.

TESTS

International English Language Testing System (IELTS) *[18 Dec 2021]*
TRF –21NG025841ILOO150A

- Listening - 8.5
- Reading - 7.5
- Writing - 7.0
- Speaking - 8.0

EXTRACURRICULAR/VOLUNTARY EXPERIENCE

Drug Free Club (Community Development Service) *[Aug 21 – Jun 22]*
Vice President

- Organized members to educate high school students on the effects of drug abuse in our society by partnering with the Nigerian Drug Law Enforcement Agency (NDLEA).

Victory Chapel, Uyo (Voluntary) *[Jan 19 - Nov 19]*
Technical Unit Director

- Coordination of unit members and other unit leaders for the effective running of service.
- Trained interested persons in live sound engineering.
- Recording, editing, archiving, and distribution of sermons via social media.

Victory Chapel, Uyo (Voluntary) *[Jan 17 - Mar 18]*
Assistant Technical Unit Director

- Worked as a live sound engineer.

Hobbies

- Streaming engineering documentaries from YouTube channels such as "interesting engineering".
- Researching new technologies in various sectors.

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REFERENCES

Dr Ajayi Wumi
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Dr Akande Oyebola
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Prof. Kingsley Udofia
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