

ILORI, OLUWASEUN OLUJIDE

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March 2023.

EDUCATION

B.Eng, Electrical and Electronics Engineering – *second class upper (4.06 / 5.0)* [2015 – 2021]

University of Uyo, Nigeria.

Final year project – smart surveillance system

- Designed and developed a surveillance system that detects motion using both a camera and a passive infrared sensor. If the user doesn't present a valid RFID tag for identification, it sends photos of the intruder to the owner's email and then places a phone call to the owner. [Link](#)

RESEARCH INTERESTS

Deep Learning, Computer Vision, Robotic Perception

WORK EXPERIENCE

MathWorks MiniDrone Competition [Video](#) [Jun 22 – Oct 22]

- Winners of the virtual round EMEA, 2022. – [Team Certificate](#) | [Link](#)
- Worked in a team of 4.
- I and another team member were responsible for developing the image processing algorithm using MATLAB and Simulink for the drone flight control system.

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. [Code](#)
- Tutored team members who didn't have experience with deep learning.

Freelance Machine Learning Engineer [Sep 21 - Nov 21]

- Conducted a research project on asthma prediction by comparing various 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.

PUBLICATIONS

- 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 [Link](#)
- Beyond RGB in Image Classification (Medium) – Comparison between various color spaces and different normalization techniques on Image classification tasks. [Link](#)
- Custom OCR using machine learning (Medium) – Building a custom optical character reader using Histogram of Oriented Gradients and Logistic regression. [Link](#)

FEATURED PROJECTS

Malaria parasite detector - [Code](#)

- Trained object detection model for malaria parasite and white blood cells using YOLOv6.
- Developed a custom API for prediction using FastAPI and Docker and deployed it on Cloud Run and Vertex AI.

Monocular Depth Estimation - [Code](#)

- Converted PyTorch's resnet18 model to TensorFlow/Keras.
- Developed custom resnet18 encoder-decoder model with skip connections for depth estimation.
- Trained the model on NYU-v2 dataset.

Automatic license plate reader for Nigerian plates - [Demo](#)

- Proper collection, cleaning and labeling of data.
- Training of a simple HOG+SVM object detector using dlib.
- Custom optical character reader with logistic regression and HOG.
- Developed a custom annotation tool for data extraction and processing.
- Trained a linear regression model to predict threshold values.

TECHNICAL SKILLS

Programming:

Proficient: Python

Familiar: C/C++ | HTML | CSS | JavaScript | SQL

Technology and Frameworks:

Proficient: Git | OpenCV | Dlib | Scikit-learn | TensorFlow/Keras | PyTorch | Data analysis and visualization | Docker | FastAPI | Linux OS | Raspberry Pi | MATLAB & Simulink

Familiar: MLflow | Pytest | Django

CERTIFICATES

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](#) [Jun 20 - Jul 20]
Took an introductory course on machine learning at CognitiveClass.ai.

Computer vision for faces - [Link](#) [Mar 18 – 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 a face recognition software as my capstone project.

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.

REFERENCES

Dr. Kingsley Udofia

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