

MUSTAPHA ABDULLAHI

Kaduna, Nigeria

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RESEARCH INTERESTS

Machine Learning, Reinforcement Learning, and Robotics

EDUCATION

Queen Mary University of London

MSc Artificial Intelligence [Computer Vision and Robotics]

Supervisor: **Dr. Bo Zhao**

Oct. 2022 - Sept. 2023 (Expected)

London, U.K.

Ahmadu Bello University

Bachelor of Engineering in Computer Engineering - CGPA: 4.90/5.00

Oct. 2015 - Nov. 2021

Zaria, Nigeria

Federal Government College, Kaduna

West African Secondary School Certificate (W.A.S.S.C.E)

Sept. 2012 - July 2015

Kaduna, Nigeria

ADDITIONAL EDUCATION

Reinforcement Learning Summer School (RLSS), Barcelona, Spain

June - July, 2023

The Cornell, Maryland, Max Planck Pre-doctoral Research School (CMMRS), Germany

Aug., 2023

Mediterranean Machine Learning Summer School (M2LSchool), Thessaloniki, Greece. **Aug. - Sept., 2023**

WORK EXPERIENCE

Play4Work

Chatbot Developer

Feb. 2021 - Mar. 2022

Canada(Remote)

- Collaborated with a team of 5 to design conversation mappings required to build an interactive chatbot.
- Spearheaded a team of 2 to develop a chatbot with over 700 conversation nodes.
- Reduced 60% of the company's workload of candidate's matching and responses processing.

Huawei

Big Data/Cloud Intern

Jan. 2020 - Feb. 2020

Lagos, Nigeria

- Setup and management of FTP Server, WordPress (Windows & Linux), Windows Share Point Server, etc. on Huawei ECS.
- Performed Relational Database migration using Cloud Data Migration Tool. Utilised Squoop to migrate data between Apache HDFS, Apache HBase, Apache Hive and MySQL database.
- Performed Data Analysis of Smart IoT solution with over 400,000 data points utilizing HiveQL for offline analysis, Apache HBase for real-time query and retrieval and Spark-SQL to migrate the offline analysis service.

PROJECTS

Evolving AlexNet CNN Maize Plant Disease Classification (Paper) [Ongoing] July 2021 to Present

- We propose a modified Binary Particle Swarm Optimisation (BPSO) algorithm to optimise the structure of the fully connected (FC) layers of CNNs.
- Developed a Tensorflow code implementation of AlexNet model
- Collaborated to derive an optimised model architecture achieving an improved accuracy of 98.3%.

iGlass

Apr. 2020 - October. 2021

- A smart assistive device for the visually impaired for reading out text, object detection, scene description, etc. using Raspberry Pi, AWS Rekognition, and Google cloud AI.
- Spearheaded the development of iGlass prototype.

CompengBot

Mar. 2021 to Apr. 2021

- a fast and efficient chatbot to answer queries of students and general public related to the computer engineering department. Deployment on the departmental website and Telegram.
- Easy and improved access to information about department and school.
- Quick access to details about courses and lecturers contact.

Transfer Learning for Classification of Cat, Dog and Pandas

Dec. 2020

- Used densenet-161 as feature extractor and achieved an accuracy of 97.3%.

AWARDS & ACCOLADES

- AEGEAN scholarship - Travel Grant to attend M2L School (one of 10 top students) - May 2023
- Best Graduating Engineering Student Award, NSE (Nigerian Society of Engineers) - Dec. 2022
- 2023 Rhodes Scholarship Finalist [West Africa] - Dec. 2022
- Google DeepMind Scholarship Recipient 2022/2023 - Aug. 2022
- QuantumBlack/Office of AI Scholarship Recipient 2022/2023 - Aug. 2022
- Best ICT Competition Instructor, Huawei ICT Competition Sub-Saharan Africa - Apr. 2022
- 1st Place, Depart. of Computer Engr. Final Year Undergraduate Project Exhibition - Oct. 2021
- 3rd Best Engineering Graduate in Nigeria (Awarded by CODET) - Aug. 2021
- NCS (Nigerian Computer Society) Jim Ovia Scholarship Award - Jan. 2021
- Grand Prize Winner, Huawei ICT Competition Global Final - Cloud Track - Nov. 2020
- 1st Place, Huawei ICT Competition Regional Final (Southern Africa) - Cloud Track - Sept. 2020
- 3rd Place, Huawei ICT Competition National Final - Cloud Track - Dec. 2019
- Nigeria Higher Education Foundation Scholar (Class of 2019) - July 2019
- 2nd Runner Up, Professor Ayodele Awojobi Design Competition (PAADC) 3.0 - July 2019
- NNPC/Total National Merit Scholarship Award - July 2018
- China-Nigeria October 1st Scholarship - Feb. 2018
- Federal Government Scholarship Award [Undergraduate Award] - August. 2017
- Agbami Special Medical and Engineering Professionals Scholarship Award - Feb. 2017

PUBLICATIONS

- [1] Mustapha , A.J., *An Artificial Intelligence of Things (AIOT) based Assistive Smart Glass for the Visually Impaired*. [Poster Presentation]. Department of Computer Engineering, Ahmadu Bello University, Nigeria. [↗](#)

TALKS

Data Science Nigeria - Beyond Building Machine Learning Models [↗](#) June 2021

VOLUNTEERING

2023 IEEE International Conference on Robotics and Automation (ICRA) May, 2023
Volunteer London, U.K.

Arewa Data Science Academy Feb. 2023 - Present
Mentor Nigeria

Kada Hive Innovation and Tech Hub May 2022
Robotics Instructor - Play Tech Kids Programme Zaria, Nigeria

Data Science Nigeria June 2021
Data Science Tutor Zaria, Nigeria

- Assisted participants in setting up data science software and packages.
- Supported the lead tutor in introducing participants to machine learning tools (such as numpy, pandas and scikit-learn).
- Participation Certificate. [↗](#)

Ahmadu Bello University Feb. 2018 – Apr. 2021
Tutor - Control Engineering (COEN303, COEN407, COEN507) Zaria, Nigeria

Computer Engineering, Ahmadu Bello University Aug. 2019
Instructor - Python Bootcamp for Kids Zaria, Nigeria

TECHNICAL SKILLS

Languages: Python, Scala, C++, MATLAB, L^AT_EX, ROS

ML Frameworks: PyTorch, Tensorflow, Keras, Apache-Spark, Scikit-Learn, XGBoost

Cloud Services: GCP, AWS, Huawei Cloud Platform

Operating System: Linux (Ubuntu, Cent OS 7.*), Windows

Big Data Tools: Hadoop, Apache Spark, Apache Hive, Hbase, MySQL, Huawei MapReduce Service, Gremlin

Microprocessors: Raspberry pi (zero, 3), Arduino, ESP32, ESP8266

Soft Skills: Leadership, Problem solving, Team Player, Time Management, Interpersonal Skills

PROFESSIONAL MEMBERSHIPS

- Black in AI, member
- Black in Robotics, member
- Nigerian Computer Society (NCS), member
- Data Science Nigeria, member
- Nigerian Society of Engineers (NSE), Graduate Member

HOBBIES

Watching anime; playing football; talks about AI and the future