

MUSTAPHA ABDULLAHI

Espoo, Finland

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RESEARCH INTERESTS

Machine Learning Systems, Reinforcement Learning, and Large Language Models

EDUCATION

Aalto University & Finnish Center of Artificial Intelligence (FCAI) **April 2024 - Present**
PhD Artificial Intelligence *Espoo, Finland*

Advisor: **Prof. Bo Zhao**

Queen Mary University of London **Sept. 2022 - Sept. 2023**
*MSc Artificial Intelligence [Computer Vision and Robotics] - **Grade: 80% (Distinction)*** *London, U.K.*

Supervisor: **Prof. Bo Zhao**

Ahmadu Bello University **Oct. 2015 - Nov. 2021**
*BEng Computer Engineering - **CGPA: 4.90/5.00 (First-class)*** *Zaria, Nigeria*

Supervisor: **Prof. Habeeb Bello-Salau**

Federal Government College, Kaduna **Sept. 2012 - July 2015**
West African Secondary School Certificate (W.A.S.S.C.E) *Kaduna, Nigeria*

MINOR EDUCATION

Mediterranean Machine Learning Summer School (M2L School), Thessaloniki, Greece. **Aug. - Sept. 2023**
The Cornell, Maryland, Max Planck Pre-doctoral Research School (CMMRS), Germany **Aug. 2023**
Reinforcement Learning Summer School (RLSS), Barcelona, Spain **June - July 2023**

INDUSTRY EXPERIENCE

QuantumBlack AI Labs (McKinsey & Company) **Oct. 2023 - Jan. 2024**
Software Engineer Intern *London, U.K.*

- Developed a one-click CLI tool for effortless deployment of **Kedro** projects on **Databricks** Platform.
- Implemented essential client study feedback as integral components within software production pipelines.

Play4Work **Feb. 2021 - March 2022**
Chatbot Developer *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 with Google DialogFlow.
- Reduced 60% of the company's workload of candidate's matching and responses processing.

Huawei **Jan. 2020 - Feb. 2020**
Big Data/Cloud Intern *Lagos, Nigeria*


- Set up and managed FTP Server, WordPress (Windows & Linux), Windows Share Point Server, etc. on Huawei Elastic Cloud Server (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 IoV 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.

RESEARCH EXPERIENCE

Large-Scale Data & Systems (LSDS), Imperial College London **June 2023 - Aug. 2023**
*Research Intern [Master's Thesis] (Advised by: **Prof. Bo Zhao** & **Prof. Peter Pietzuch**)* *London, U.K.*

- Evaluated tradeoffs among three distribution policies of MindSpore Distributed RL.

PUBLICATIONS

- [1] Oluwole Fagbohun, Nwaamaka Pearl Iduwe, **Mustapha Abdullahi**, Adeseye Ifaturoti, Obinna Maxwell Nwanna. Beyond Traditional Assessment: Exploring the Impact of Large Language Models on Grading Practices. *Journal of Artificial Intelligence, Machine Learning and Data Science (JAIMLD)*, 2024.
- [2] **Mustapha, Abdullahi**. An Artificial Intelligence of Things (AIOT) based Assistive Smart Glass for the Visually Impaired. [Poster Presentation]. Department of Computer Engineering, Ahmadu Bello University, Nigeria, 2021. 


AWARDS & ACCOLADES

• Finnish Doctoral Program Network in Artificial Intelligence (AI-DOC) funded by Finnish Center of Artificial Intelligence (FCAI).	2024-2027
• Finland Fellowship [for doctoral studies at Aalto University]	2024
• Black in AI's Emerging Leaders in AI (ELAI)	2023
• AEGEAN Scholarship - Travel Grant to attend M2L School (one of 10 top students)	2023
• Best Graduating Engineering Student Award, NSE (Nigerian Society of Engineers)	2022
• 2023 Rhodes Scholarship Finalist [West Africa]	2022
• Google DeepMind Scholarship	2022-2023
• QuantumBlack (McKinsey Company)/Office of AI Scholarship	2022-2023
• i-Scholar Initiative (iSI) Awardee	2022
• Best ICT Competition Instructor, Huawei ICT Competition Sub-Saharan Africa	2022
• 1st Place, Dept. of Computer Eng. Final Year Undergraduate Project Exhibition	2021
• 3rd Best Engineering Graduate in Nigeria (Awarded by CODET)	2021
• NCS (Nigerian Computer Society) Jim Ovia Scholarship Award	2020-2021
• Grand Prize Winner, Huawei ICT Competition Global Final - Cloud Track	2020
• 1st Place, Huawei ICT Competition Regional Final (Southern Africa) - Cloud Track	2020
• 3rd Place, Huawei ICT Competition National Final - Cloud Track	2019
• Nigeria Higher Education Foundation Scholar (Class of 2019)	2019
• 2nd Runner Up, Professor Ayodele Awojobi Design Competition (PAADC) 3.0	2019
• NNPC/Total National Merit Scholarship Award	2018-2021
• China-Nigeria October 1st Scholarship	2018
• Federal Government Scholarship Award [Undergraduate Award]	2017-2021
• Agbami Special Medical and Engineering Professionals Scholarship Award	2017-2021

TEACHING EXPERIENCE

Research Advisor, CS-E4645: Research Project on Data Intensive Computing, Aalto University	Spring 2025
Teaching Assistant, CS-E4780 Scalable Systems and Data Management, Aalto University	Autumn 2024

TALKS

Kedro Databricks Deploy, QuantumBlack AI Labs, London, U.K.	Dec. 2023
Beyond Building Machine Learning Models  , Data Science Nigeria, Nigeria	June 2021

PROJECTS

Evolving AlexNet CNN Maize Plant Disease Classification	July 2021 to Oct. 2021
• Collaborated to 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	April 2020 - Oct. 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	March 2021 to April 2021
• A fast and efficient chatbot to answer queries of students and the general public related to the computer engineering department. Deployed on the departmental website and Telegram page.	
• 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%.	

VOLUNTEERING

2025 Deep Learning Indaba

Application Reviewer

Feb. 2025 - Present

Remote

Black in AI - Emerging Leaders in AI Grad Prep Program

Academic Mentor

Dec. 2024 - Present

Remote

iScholars Initiative (iSI)

Academic Mentor

Sept. 2023 - Present

Remote

2023 IEEE International Conference on Robotics and Automation (ICRA)

Volunteer

May 2023

London, U.K.

Arewa Data Science Academy

Deep Learning Mentor [videos](#) [↗](#)

Feb. 2023 - Present

Nigeria, Remote

Kada Hive Innovation and Tech Hub

Robotics Instructor - Play Tech Kids Programme

May 2022

Kaduna, Nigeria

Data Science Nigeria

Data Science Tutor

June 2021

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).

Ahmadu Bello University

Tutor - Control Engineering (COEN303, COEN407, COEN507)

Feb. 2018 – April 2021

Zaria, Nigeria

Computer Engineering, Ahmadu Bello University

Instructor - Python Bootcamp for Kids

Aug. 2019

Zaria, Nigeria

TECHNICAL SKILLS

Programming Languages: Python, Scala, C++, MATLAB, \LaTeX , ROS

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

Cloud Services: GCP, AWS, Databricks Platform, 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