

TOLUWASE BABALOLA

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EDUCATION

University of Hull

Masters of Science in Artificial Intelligence and Data Science

September 2022 - September 2023

Hull, England

Kwara State University

Bachelor of Engineering in Aeronautical and Astronautical Engineering

August 2014 - May 2019

Kwara, Nigeria

SKILLS

Programming Languages: Python, SQL, Excel, C++

Libraries: NumPy, Sci-Py, Sci-Kit Learn, Seaborn, Matplotlib, Keras, TensorFlow, PyTorch

Data Science: Data Mining, Statistical Analysis, Business Analysis, RNN, NLP, Text and Image classification, Visualization and Interpretation

WORK EXPERIENCE

Upwork

Data Scientist

August 2023 - date

Remote, United Kingdom

- Developed predictive models and analytics dashboards for clients across various industries including e-commerce, healthcare and finance
- Delivered data pipeline and recommendation system for dating app startup resulting in **7.5 percent** increase in successful matches

ExecuJet Aviation

Production Engineer

October 2019 - July 2021

Lagos, Nigeria

- Created methods and monitored workflows for procedures after flight inspections with edit functionality, this allowed us to report, document and track ground operations in the hangar. Adding this feature saved each manual maintenance time by an average **15 minutes**.
- Developed quick and simple methods to improve results on the interior and exterior surfaces of nosecones to increase flight data recorder reusability by 1.5 times better. The data was revised and used to update separate Post-Flight and scheduled inspection documents, specifically general procedure and specifications.

Nigerian Air Force 631 Aircraft Maintenance Depot

Maintenance Analyst Intern

January 2018 - July 2019

Lagos, Nigeria

- Documented over 80 technical equipment that should remain with the maintenance facility for planning and mobility
- Managed and analysed daily data worksheet for military aircraft maintenance manual, saving 5 hours weekly manual work report
- Performed over 10 Pre-Flight checks on the C130 Lockheed Martin and ATR 42 MP aircraft to compile and visualize recorded aircraft data for improved ground operation and quality control

FEATURED PROJECTS

Malicious URL detection using Google's BERT and LSTM

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- Trained and compared two models, LSTM and Pre-trained BERT, to detect whether a webpage is malicious or not. The data used for training and evaluation consisted of 522,214 entries. The LSTM model achieved an accuracy of 91.36 percent and a loss of 0.25, while the Pre-trained BERT model achieved a lower accuracy of 75.9 percent due to hardware malfunctions.

Predicting Systolic Blood Pressure in Maternal Health

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- Designed and implemented a multiple linear regression model to predict systolic blood pressure (BP) in maternal health using predicting factors such as age, blood sugar, and diastolic BP. To improve the model's performance, Principal Component Analysis (PCA) was applied to reduce the dimensionality of the refined data. The project's prediction aspect indicated that approximately 53 percent of the variation in systolic BP could be predicted by the selected features.

Customer Data Pre-Processing

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- Created a method to analyse customers' credit card validity and salary entries involving distance commuted to work and a number of dependents. This algorithm was developed to improve clients' financial operations by 6.5 percent. I prepared this data for further analyses including representation changes, filtering, and derived a new metric for the customer's work status.

Emergency Vehicle Identification using deep learning

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- Developed a convolutional neural network (CNN) architecture using Keras to process the input 700+ images and classify them as emergency or non-emergency vehicles from various angles and lighting conditions.
- ImageDataGenerator class was used to augment the training data and improve model performance and achieved high accuracy in detecting emergency vehicles, with a precision and recall of 95 and 96 percent respectively.

CERTIFICATIONS AND INTERNSHIPS

- **Internships:** Cognizant Virtual Experience Program on Forage [May 2023]. Conducted analysis of grocery store data to improve estimated stock percentage. Developed a model for deploying an IoT sensor to monitor products' temperature during storage thereby increasing sales.
- **Certifications and Training:** Data Scientist with Python Certification [DataCamp]; Machine Learning Crash Course with TensorFlow APIs [Google Developers]; Data Science Tools and Methodology [IBM Cognitive class]; Machine Learning and Python [Data Science Nigeria]
- **Memberships:** Member, Society of Artificial Intelligence [International Association of Engineers; Internship Experience UK: Engineering Infrastructure [Bright Network]; Contributor at Python Software Foundation