Kabiru O. Akande

https://github.com/kbakande/
https://www.linkedin.com/in/koakande/

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Email : koakande@gmail.com
Google Scholar : Kabiru Akande

Experience

- **Big Data Enterprise and Artificial Intelligence Laboratory (Big-DEAL)** Bristol, UK
  Machine Learning Engineer *Sept 2019 - Present*
  - **Conversational-BIM**: Develop Conversational-BIM chatbot which uses automatic speech recognition and natural language understanding for improving construction site productivity. Employ AWS cloud services (Lex, Lambda and DynamoDB) and develop software architecture/data pipelines for deployment. Product POC is being trialled.
  - **Healthy-Air**: Healthy-Air uses time-series predictive models for improving poor indoor air quality. Build data architecture for cloud storage, train time-series models (RNN and LSTM) for day-ahead prediction and develop dynamic visualisation platform with REST APIs for real-time monitoring.
  - **ASPEC**: An AI system for predicting Embodied Carbon to achieve Net-Zero infrastructure projects. Train deep learning models. Productionise and automate POC deployment. Develop analytics platform for exploration.
- **MindfulChef** London, UK
  Data Scientist *July 2019 - Sept 2019*
  - **Digital Waiter Recommendation System**: Build a personalised recommender system that outperform existing company framework by 30%. Pull data from AWS DynamoDB, develop innovative features by embedding recipes in recipe space (**recipe2vector**). Train multiple models (LR, RF & DNN). Employ MAP@K metric to evaluate ranked choices. Productionised with Flask REST APIs, dockerised and deploy product on Heroku.
- **Li-Fi Research and Development Center** University of Edinburgh, UK
  Research and Teaching Assistant *Nov 2015 - July 2019*
  - **Channel Modelling**: Develop multilayer perceptron models for channel estimation. Model outperform domain state-of-the-art by 5%.
  - **Automated App**: Develop MATLAB application for automating experimental workflows. My app results in 50% improvement in productivity among Lab users.
  - **Teaching**: Provide technical support to students learning MATLAB, signal laboratory and advanced engineering maths.
- **Center for Petroleum Refining and Petrochemicals** Dammam, KSA
  Research and Teaching Assistant *Sept 2012 - Sept 2015*
  - **Research Assistant - Machine Learning**: Obtain 3 US patents. Research on machine learning for oil reservoir characterisation. Develop novel features engineering technique that results in 10% improvement. Publish the technique with over 60 citations.
  - **Teaching Assistant - Stochastic Processes**: Taught MATLAB, detection and estimation theory, neural networks application and evolutionary algorithms.

Education

- **University of Edinburgh** Edinburgh, UK
  PhD in Electrical Engineering *Nov. 2015 – Feb. 2019*
- **King Fahd University of Petroleum and Minerals, KFUPM** Dammam, KSA
  Master of Science in Electrical Engineering; GPA: 93% *Sept. 2012 – Dec. 2014*
- **Ladoke Akintola University of Technology, LAUTECH** Ogbomoso, Nigeria
  Bachelor of Technology in Electrical and Electronics; GPA: 86% *Sept. 2004 – Dec. 2009*

Programming Skills

- **Languages**: Python, Javascript, SQL **Technologies**: AWS, Docker, Keras, Tensorflow, Pandas, Git

Achievements and Awards

- Three US Granted Patents| Endorsed as UK Promising Talent by Royal Academy of Engineering| Digital Waiter won most innovative prize at 2019 S2DS| University of Edinburgh PhD Bright Scholar
- **Personal Interest:** Footballing| Long Distance Running| Volunteering (Coding & Tutoring ML Concepts)

Core Offerings:

I am a machine learning engineer and a PhD holder (Signal Processing) with extensive experience and expertise in data analysis, machine learning applications, signal processing and software development. With a very strong mathematical and statistical background, I have experience in building, testing, productionising and automating data-driven maintenance of machine learning models' pipelines. It is all about sustaining dynamic online ML products.

Technical Skills

- **Programing & Languages:** Python, SQL, Git, Javascript, React, Matlab
- **Big Data & Machine Learning:** Python Libraries (NumPy Pandas, Statsmodels, Prophet, Keras, Tensorflow)
- **Data Visualization & Graphing:** Matplotlib, Plotly, Seaborn
- **Databases:** Relational (MySQL) & Non-Relational –(MongoDB)
- **MLOps:** Containerisation & Orchestration (Docker, Kubernetes), CI/CD, AWS services(Lex, Lamda, EC2, RDS etc)

Skills/Experience

- Degree: PhD in Electrical Engineering (finish in record time)
- Strong problem-solving skills (Complete PhD in 2.5 years with 12 publications and three US granted patents)
- Experience in cloud application deployment (Heroku and AWS)
- Experience in project management (Supervises junior data scientists and PhD students as well as liaising with customers and stakeholders)
- Solid understanding of deep learning and machine learning algorithms (RNN, LSTM, NN, SVM, RF) as well as frameworks (Pandas, Scikit Learn. Keras and Tensorflow)
- Experience in CI/CD flow and containerisation (Github, Docker, Kubernetes)
- Strong communication and presentation skills (won best presentation during my PhD)
- Experience with diverse programming languages (Python, MATLAB, JavaScript) and their libraries (Flask, React, Nodejs etc)
- Excellent track record
    - 3 US granted patents
    - Over 50 top notch publications
    - Studied MS and PhD on scholarship,
    - Won the **best and most innovative data science project** in the largest European competition (S2DS 2019)
    - Endorsed by UK royal academy of engineering (UK RAE) as an **Exceptional Talent**

Day to Day Responsibilities

- I have worked as project manager, customer engagement officer, machine learning engineer, data scientist, software engineer as well as web developer. Working with four start-ups has made me assume these roles at various times in my current

employment. This has given me an end-to-end view of the machine learning project lifecycle as well as how to progress it to completion.

- I work with fellow engineers, data scientists, project monitoring officers, end users and stakeholders to progress projects to completion.
- I lead and guide my team to identify opportunities for solving real-world problems with machine learning techniques.
- I regularly review our database to identify opportunities for data collection improvement in response to new business problems or to improve existing customer offerings.
- I write end-to-end clean code, complete with CI/CD, that query database, clean the data, model suitable machine learning algorithms and deploy to the cloud (Heroku and AWS).
- I identify novel intellectual property and make effort to secure IP (I have three granted patents with US patent office).
- I apply statistical methods to establish significance of new model/product feature such as through A/B testing.
- I write technical documentation to ensure my code can be reused across our organisation.
- I participate in writing reports to communicate project progress to various stakeholders and regularly make presentations in respect of this.
- I conduct regular classes for the junior engineers on ideation and conceptual explanation of machine learning techniques

DeepLearning.AI

COURSE CERTIFICATE

Feb 18, 2019

Kabiru Oluwaseun Akande

has successfully completed

Neural Networks and Deep Learning

an online non-credit course authorized by DeepLearning.AI and offered through Coursera

Andrew Ng, Founder, DeepLearning.AI & Co-founder, Coursera
Kian Katanforoosh, Co-founder, Workera
Younes Bensouda Mourri, Instructor of AI, Stanford University

Verify at coursera.org/verify/6RLL35GJFQ7K

Coursera has confirmed the identity of this individual and their participation in the course.

DeepLearning.AI

COURSE CERTIFICATE

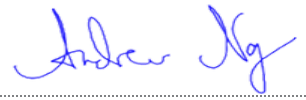
Jul 8, 2019

Kabiru Oluwaseun Akande

has successfully completed

Sequence Models

an online non-credit course authorized by DeepLearning.AI and offered through Coursera



Andrew Ng, Founder, DeepLearning.AI
Kian Katanforoosh, Co-founder, Workera
Younes Bensouda Mourri, Instructor of AI, Stanford University

Verify at coursera.org/verify/GZW3YYQYLLUC

Coursera has confirmed the identity of this individual and their participation in the course.

UNIVERSITY OF MICHIGAN

COURSE CERTIFICATE

Apr 8, 2019

Kabiru Oluwaseun Akande

has successfully completed

Applied Machine Learning in Python

an online non-credit course authorized by University of Michigan and offered through Coursera

Kevyn Collins-Thompson
Associate Professor
School of Information

Verify at coursera.org/verify/ND5RJJZ47YAW

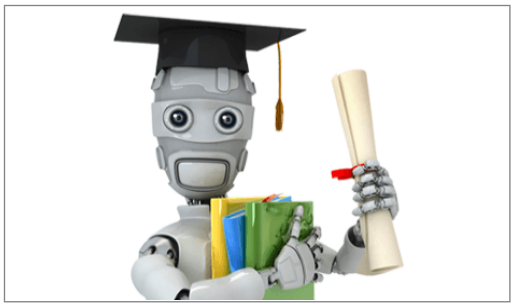
Coursera has confirmed the identity of this individual and their participation in the course.

SEPTEMBER 30, 2014

Online Course
Statement of Accomplishment

AKANDE KABIRU

HAS SUCCESSFULLY COMPLETED A FREE ONLINE OFFERING OF THE FOLLOWING COURSE PROVIDED BY STANFORD UNIVERSITY THROUGH COURSERA INC.



Machine Learning

Congratulations! You have successfully completed the online Machine Learning course (ml-class.org). To successfully complete the course, students were required to watch lectures, review questions and complete programming assignments.

ASSOCIATE PROFESSOR ANDREW NG
COMPUTER SCIENCE DEPARTMENT
STANFORD UNIVERSITY

VERIFIED CERTIFICATE OF COMPLETION

October 06, 2020

UDACITY

Kabiru Oluwaseun Akande

Has successfully completed the

Full Stack Web Developer

NANODEGREE PROGRAM

Sebastian Thrun
Founder, Udacity

Udacity has confirmed the participation of this individual in this program.
Confirm program completion at confirm.udacity.com/NG5CDYPW

5 Courses

Programming for Everybody (Getting Started with Python)

Python Data Structures

Using Python to Access Web Data

Using Databases with Python

Capstone: Retrieving, Processing, and Visualizing Data with Python

UNIVERSITY OF MICHIGAN

Jan 1, 2019

Kabiru Oluwaseun Akande

has successfully completed the online, non-credit Specialization

Python for Everybody

This Specialization builds on the success of the Python for Everybody course and will introduce fundamental programming concepts including data structures, networked application program interfaces, and databases, using the Python programming language. In the Capstone Project, you'll use the technologies learned throughout the Specialization to design and create your own applications for data retrieval, processing, and visualization.

Charles Severance
Clinical Associate Professor, School of Information
University of Michigan

The online specialization named in this certificate may draw on material from courses taught on-campus, but the included courses are not equivalent to on-campus courses. Participation in this online specialization does not constitute enrollment at this university. This certificate does not confer a University grade, course credit or degree, and it does not verify the identity of the learner.

Verify this certificate at:
coursera.org/verify/specialization/PERTCE6TAR3X