ABIODUN TIMOTHY OLAOYE

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EDUCATION

Massachusetts Institute of Technology, MIT
Level: PhD Mechanical Engineering and Computation (June 2019) | Minor: Data Science & Statistics

Massachusetts Institute of Technology, MIT
Degree: MS Mechanical Engineering (June 2015)

Relevant Modules:
Computational Science & Eng., Data Mining, Applied Probability & Stochastic Models, Financial Data Science.

University of Lagos, UNILAG, Nigeria
Degree: BSc. Petroleum and Gas Engineering (Dec. 2010)

PROFESSIONAL EXPERIENCE

Senior Performance Engineer (Data Analytics), *RWE Renewables,* Austin, TX (Mar. 2021 – Present)
Investigative data analysis of wind turbine underperformance issues to boost efficiency and reliability.
Energy production and loss calculations of wind turbines with potential for machine learning applications.
Analysis of alarms, power curves, generator details and signal trends for descriptive and predictive insights.
Development of incident detection and KPI monitoring dashboards in Tableau.

Data Scientist (Project Lead), *Siemens ITS Digital Lab,* Austin, TX (Aug. 2019 – Jan. 2021)
Developed machine learning solutions for mobility use cases such as adaptive traffic management systems.
Built data-driven automatic countermeasures recommendation system using location and crash-event-based features.
Conducted research on applying artificial intelligence to dynamic lane management.

Research Engineer, *Acciona Energy Technology Innovation Dept.,* Spain (Jul. 2018 – Aug. 2018)
Assisted with project employing transfer learning for predictive analytics of wind turbine components failure.

Graduate Research Associate, *MIT Towing Tank Laboratory,* Cambridge, MA (Sep. 2016 – June 2019)
Prediction of dynamic behavior of physical systems using physics-based models.
Validation of numerical models by comparison with experimental results.
Tuning model parameters to improve predictive performance as necessary.
Post-processing and visualization of 2 GB data per simulation using self-developed MATLAB codes.

Project Engineer, *Compass Energy Pte Ltd,* Singapore **(**Jun. 2015 – Aug. 2015)
Extensive use of Microsoft Project software and other packages to develop and track project schedule.

TECHNICAL SKILLS

Statistics: Hypothesis testing, bootstrapping, inferential statistics, conditional probability.
Data Science: Data exploration, cleaning and visualization, outlier identification, feature engineering, big data.
Machine Learning: supervised, unsupervised and reinforcement learning, time series prediction.
Deep Learning: RNN, LSTM, CNN, computer vision, natural language processing
Statistical Coding: R (ggplot2, caret), Python (NumPy, Pandas, Scikit-learn, TensorFlow), Pyspark, SQL.
Cloud computing: AWS Sagemaker, S3
Data Viz: Tableau, PowerBI, AWS QuickSight

PROJECTS

Wind turbine power curve filtering module (Personal Python Project, 2021)
Crash hotspots analytics (Siemens project, 2020).
AI-powered adaptive traffic management (Siemens project, 2020).
Data-driven dynamic lane management (Siemens project, 2019).
Wind energy analytics (Personal Python project, 2020).
Classification tasks involving severely unbalanced data (Personal Python project, 2019).
Leveraging data mining techniques to predict wildfires (Personal R project, 2018).

HONORS, AWARD & RESPONSIBILITIES

Siemens Mobility MONA Award, Customer first: New customers through data-driven approaches, 2020.
Session chair, MTS/IEEE OCEANS'16 conference. Track: Naval use of Unmanned Systems 2, 2016.
Recipient of Presidential Special Scholarship for Innovation and Development (PRESSID), 2012.
Recipient of University of Lagos Endowment Scholarship for Distinguished Scholars from 2006 - 2010.

RELEVANT WRITE-UPS

Wind energy analytics toolbox: Iterative power curve filter (Towards Data Science, 2021).
Crash hotspots analytics: smoothing the path to vision zero (27th ITS World Congress, Los Angeles, CA, 2020).
Forecasting wind power from multiple numerical weather predictions (Medium post, 2020).
Leveraging data mining techniques to predict wildfires, (MIT project, Cambridge, MA, 2018).