JOSHUA OGUNDAIRO

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RESEARCH INTERESTS

My research interests focus on applied time series analysis in economics and finance, particularly emphasizing econometrics, financial econometrics, and financial time series. I also have a solid foundation in Bayesian statistics, biostatistics, and machine learning.

EDUCATION

BTech, *Federal University of Technology, Akure*   *2015 – 2021*
Department of Statistics
GPA: 3.76/5.0 (Second Class Upper)
Research Project: Comparative Analysis of Energy Consumption and Economic Growth of Some Developing Economies: A Time Series Approach.
 Advisor: Dr. Oluwadare O. Ojo

PUBLICATIONS

[3] ***Joshua Ogundairo***, Oluwadare Ojo. "Impacts of GDP and Debt Servicing on Exchange Rate Volatility: A Bayesian GARCH-M Approach" in review (2024)

[2] ***Joshua Ogundairo***, Adebimpe Aladeniyi, Olumide Arigbede, The Supervisor. "Levels and Determinants of Anxiety and Depression among Undergraduate Finalists in FUTA" in review (2024)

[1] ***Joshua Ogundairo***, Paul Timi Oluwadare, Luca Di Gennaro. "Energy-Growth Dynamics in the Presence of Income of 5 Oil-Exporting African Countries: A Time Series Approach" (Accepted) Journal of the Royal Statistical Society - Nigeria Group (Nov., 2024)

SELECTED PROJECTS

Nonlinear Cointegration Tests for PSTRVEC   *github repo* ↗
From scratch, I wrote some codes to perform econometric nonlinear cointegration tests for the Panel Smooth Transition Regression Vector Error Correction Model (PSTR-VECM).
Tool Used: R

Analysis of Missing Value Correction Methods   *github repo* ↗
Created datasets with 10, 20, and 50 percent missingness (MCAR, MAR) and applied imputation methods (CCA, MI, HD, KNN) to address missing data. Modeled corrected datasets using logistic regression and compared model performance.
Tool Used: R

Hybrid ARIMA and LSTM-ANN for Ethereum Prices   *github repo* ↗
Developed a hybrid model of ARIMA and LSTM-ANN to predict Ethereum prices, integrating statistical and deep learning techniques for enhanced forecasting accuracy.
Tools Used: Python, Jupyter Notebook

Comparative Analysis of GLM, Decision Trees and SVM   *github repo* ↗
This project compared GLM, decision trees, and SVMs for a dress recommendation system, evaluating model performance to identify the most effective approach.
Tool Used: R

SELECTED PROFESSIONAL EXPERIENCE

Research and Teaching Assistant *Akure, Nigeria*
Federal University of Technology, Akure *May 2024 – present*

- Assists in delivering lectures on introductory statistics, covering topics such as introductory descriptive and inferential statistics, measures of central tendency and dispersion, hypothesis testing, Bayes' theorem, and introductory linear regression.
- Trained penultimate-year student interns in data analytics foundations and statistical tools, including Excel, SPSS, Stata, and R.
- Trains fresh graduates on data analytics foundations and practical applications, emphasizing R, Python, and SQL, as part of FUTA-LISA's 3-month data analytics training program.
- Advised by different professors on my research articles across the applied time series and biostatistics specializations.

Statistical Consultant *remote*
Integritas Limited *Nov 2023 – present*

- Perform statistical analysis for efficient evaluation of the specific context.
- Visualize data appropriately to sufficiently analyze KPIs.
- Provide adequate recommendations based on statistical findings.

Research and Data Analyst *remote*
OLLY Analytics *Nov 2021 – present*

- Successfully developed an application for a client to perform large web-scrapping that gathers data from five websites efficiently using the Scrappy framework in Python.
- Delivered several statistical machine learning modeling implementations, such as random forests, decision trees, logistic regressions, SVMs, RL, and neural networks, for academic thesis writing.
- Efficiently recommend analytical strategies that will be most advantageous.
- Delivered comprehensive data analytics training sessions focused on guiding individuals in selecting the most suitable methods and software tools for addressing diverse analytical challenges and scenarios.

Data Analyst Assistant (Contract) *Abuja, Nigeria*
European Union - Election Observation Mission, Nigeria 2023 *Feb 2023 – Mar 2023*

- I developed intelligent visualization dashboards to communicate the dynamics of the Nigerian 2023 general elections effectively. Utilizing data gathered by our field agents nationwide, I transformed complex information into visually impactful representations.
- I spearheaded an efficient communication strategy to ensure seamless dissemination of the electoral situation of each federation state, including Abuja.
- Trained data collection assistants on how to preserve data quality and efficiency.
- In collaboration with the data analyst, we performed statistical evaluations and estimations of key parameters for measuring electoral outcomes.

Data Analyst and Deputy Lead Content Control Officer *Akure, Nigeria*
Factware IT *Jan 2020 – Oct 2021*

- I collaborated with the Content Control Lead to deliver analytical findings and enhance communication.
- As an essential member of the analytics team, I provided comprehensive qualitative and quantitative analysis for research projects, meeting objectives and specifications.

VOLUNTEERING EXPERIENCE

Data Analyst (National Youth Service Corps)   *Lagos, Nigeria*
Workload NG   *2022 - 2023*

- ○ Comprehensively analyzed customer survey data to understand their satisfaction level.
- ○ Analyzed data of sellers' ratings by customers to understand and visualize the performances of sellers onboarded on the system.

Data Analytics Trainer   *Akure, Nigeria*
Favourite Doctor   *2021*

- ○ Trained startup interns and employees to analyze medical data effectively, uncovering insights to recommend top medical practitioners to users.
- ○ Executed analytical methods on projects with the data analytics team in a manner that yields the best outcomes.
- ○ Accurately develop curriculums to advance team members from beginner to intermediate data analysts proficiently.

Lead Trainer (Data Analytics in R)   *Akure, Nigeria*
Federal University of Technology, Akure - LISA   *2020 – 2021*

- ○ Trained over 70 starters from beginner to intermediate R programming and data analytics skills.
- ○ Accurately designed the curriculums to take the trainee from beginner to intermediate in R programming.
- ○ Successfully guided trainees on data analytics by delivering structured lectures that sufficiently gave them a sense of direction.
- ○ Efficiently planned hackathon with fellow lead trainers for trainees to practicalize their acquired knowledge.

SELECTED COURSEWORKS

Python Programming (2023)   *certificate* ↗
Advanced R Programming (2020)   *certificate* ↗

TECHNICAL CAPABILITIES

Languages: R, Python

Technologies: LaTeX, SPSS, Stata, Eviews, RStudio, Jupyter Notebook

Data Science: SQL, Power BI, Excel

Others: Nvivo