LILIAN NGONADI

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ResearchGate | Google Scholar | GitHub | DataCamp Portfolio

HIGHER EDUCATIONAL QUALIFICATIONS

- **MSc** Statistics, Nnamdi Azikiwe University, Awka,Nigeria 2017-3rd Sept 2019
  Thesis: *"Alphabetic Optimality Criteria for 2^k Central Composite Design"*
  GPA:4.69/5.0 Top 2% Distinction
- **BSc** Statistics, Nnamdi Azikiwe University, Awka, Nigeria 2011-31st July 2015
  Thesis: *"Statistical Analysis on the Contributions of Some Economic sectors to Nigeria GDP"*.
  GPA:4.57/5.0 Top 2% First Class Honors

CAPSTONE PROJECTS

For detailed descriptions of my personal projects, please visit my **GitHub profile**

Healthcare Facility Classification in Nigeria   2024

- **Description**: Developed a machine learning model to classify healthcare facilities in Nigeria into functional, not functional, unknown, and partially functional categories.
  Technologies: Python, XGBoost, Pandas, Scikit-learn.
  Skills: Data preprocessing, feature engineering, model training and evaluation, model deployment
  Achievements: Achieved an accuracy of 92% in classification, which helped identify regions with inadequate healthcare services and guided planning for new facilities.

Sentiment Analysis of Social Media Posts   2024

- **Description**: Implemented a sentiment analysis model to classify social media posts into positive, negative, and neutral sentiments.
  Technologies: Python, NLTK, Scikit-learn, Pandas.
  Skills: Text preprocessing, natural language processing (NLP), classification, model evaluation.
  Achievements: Successfully classified sentiments with an accuracy of 96%, enabling better understanding of public opinion and aiding in social media marketing strategies.

Exchange Rate Volatility and Anomaly Detection   2024

- **Description**: Analyzed the volatility and identified anomalies in the exchange rate between the US Dollar (USD) and the Nigerian Naira (NGN) over the period from 2001 to 2024.
  Technologies: Python, Pandas, Scikit-learn, Matplotlib.
  Skills: Time series analysis, anomaly detection, data visualization, statistical modeling.
  Achievements: Successfully identified key periods of volatility and anomalies, providing insights for economic policy and financial planning.

Predicting Student Performance   2022

- **Description**: Developed a model to predict student performance based on socio-economic factors, attendance records, and previous academic performance.
  Technologies: Python, Scikit-learn, Pandas, Matplotlib.

Skills: Data preprocessing, regression modeling, feature selection, evaluation metrics.

Achievements: Achieved a prediction accuracy of 88%, allowing educators to identify at-risk students early and implement targeted interventions to improve academic outcomes.

CERTIFICATE

• Applied data Science Lab	[Credly Badge](#)	WorldQuant ,US
• AI fundamentals	[DataCamp AI Skill Verification](#)	Datacamp
• Human Skill Course	[Coursera Certificate](#)	Coursera
• Advanced Google Analytics	[Certificate](#)	Google
• Google Analytics for Beginners		Google
• Crash Course on Python	[Certificate](#)	Google

HONORS AND AWARDS

• Best Female Graduating Student in Statistics, Nnamdi Azikiwe University,	2015
• Dean's Merit Award for Emerging with First Class Honors	2015

MEMBERSHIP OF PROFESSIONAL BODIES

• Member, Nigerian Statistical Association (NSA)	2019-present
• International Biometry Society	2019-present

RELEVANT WORK EXPERIENCE

- **Data Scientist, Nnamdi Azikiwe University, Awka, Nigeria**　　2019-2024
Over 150 undergraduates were effectively taught **Introduction to Data Science and Statistics**, supervised, marked, and graded in data science course. I taught students essential Python packages for data science, including NumPy for numerical computations, Pandas for data manipulation, Matplotlib for data visualization, Seaborn for statistical graphics, Scikit-learn for machine learning, and TensorFlow for deep learning. This tools equiped students with the skills to handle data analysis, visualization, and predictive modeling efficiently.

- **Machine Learning Scientist, PeemanBiz Limited**　　2022-2023

  Description: Developed dynamic pricing models with respect to vehicle sales and rentals, taking into consideration factors such as demand in the market, condition of the vehicle, and competition.

  Technologies: Python, Scikit-learn, Pandas.

  Skills: Regression modeling, feature engineering, data preprocessing, model evaluation.

  Achievements: Applied various machine learning techniques, such as regression models and decision trees, in a competitive and profitable price setting. Optimized the pricing strategy, ensuring a 15% increase in sales and a 10% improvement in rental profitability.

- **Chukwuemeka Odumegwu Ojukwu University Teaching hospital Awka**　　2014
Data Analyst: I collated inpatient and outpatient data on a daily basis and effectively analyzed theresult at the end of the month and the result sent to the Chief Medical director (CMD) of the hospital.

VOLUNTEERING AND INTERNSHIP

- **Datascientist**: I developed dynamic pricing models for PeemanBiz Limited company.
- **Data Analyst Intern:** I worked as a Data Analyst in Chukwuemeka Odumegwu Ojukwu University Teaching hospital, Awka, Nigeria, where I collated inpatient and outpatient data on a daily basis and effectively analyzed the result at the end of the month.
- **N-power Volunteer:** I worked as a teacher at Amaenyi Girls Secondary School, Awka, Nigeria, whereI taught

and graded students in Mathematics.

RESEARCH EXPERIENCE AND INTEREST

- My current research interest is in Data science with specialization in Machine Learning

- I have undergraduate research experience in Time Series and Regression. I submitted a project entitled "Statistical Analysis on the Contributions of Some Economic sectors to Nigeria GDP". The project contained an Autoregressive and a regression model on the contributions of three sectors (Industry, Building and construction, Service) to the Nigeria Gross Domestic Product (GDP). Data used for the project was collected yearly from 1983 to 2013, from Central Bank of Nigeria (CBN) Statistical Bulletin published on their website.

- I have graduate research experience in Design of Experiment. I submitted a thesis on the topic "Alphabetic Optimality criteria for 2^k Central Composite Designs" in partial fulfillment of my master's degree. The thesis considered four types of Central Composite Designs (Rotatable, Orthogonal, Spherical and Face centered) for factors $k=2,3,\ldots,6$ with 8 variations of CCD using the A, D and G optimality criteria.

PUBLICATIONS

- Obubu M., Okoye V.C., Omoruyi F., & **Ngonadi L.O, (2017),** Infant Mortality, A Continuing Social Problem In Northern Nigeria: Cox Regression Approach: *American Journal of Innovative Research and Applied Sciences*, volume 5, No 5, Pp.307-311.

- Eze F.C & **Ngonadi L.O (2018),** Alphabetic Optimality Criteria for 2^k Central Composite Design: *Academic Journal of Applied Mathematical Sciences*, Volume 4, No 9, pp 107-118, 2018.

- **Ngonadi L.O &** Eze F.C **(2019),** Some Optimality Variations of Central Composite Design: *Academic Journal of Applied Mathematical Sciences*, Volume 5, No 4, pp 32-34, 2019.

- **Ngonadi L.O,** Ezemma G.C, Etaga H.O &Ugoh C.I **(2021),** English Premier League Scoreline Analysis: A Stochastic and Game Theory Approach: American Journal of Theoretical and Applied Statistics, vol10(3), pp136, 2021.

- Etaga Harrison O, Okoro Ifeanyichukwu, Aforka Kenechukwu F. and **Ngonadi Lilian O. (2021),**Methods of Estimating Correlation Coefficients In The Presence Of Influential Outlier(s): *African Journal of Mathematics and Statistics Studies*, Volume 4, No 3, pp 157-185, 2021.

ADMINISTRATIVE EXPERIENCE

- **Machine Learning Scientist Team lead**, PeemanBiz   2022-2023
- **Team Lead**, Data Scientist Interns, Nnamdi Azikiwe University, Awka, Nigeria

                                                           2021-2022

ICT SKILLS

- R, Python, SQL,AWS,AZURE, GIT

LANGUAGES SPOKEN

- Fluent in English: The official language of instruction in Nigeria

REFERENCES

- Provided on request