Lilian Ngonadi

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ResearchGate , LinkedIn , GitHub

EDUATION

Nnamdi Azikiwe University	**Anambra State, Nigeria**
Master of Science (M.Sc.) in Statistics	**Jan. 2017 - Sept. 2019**

Distinction - 4.65/5.0 Link**(WES -** *3.83/4.0* | Link**)**
Thesis Title: *Alphabetic optimality Criteria For 2^k Central Composite Design*

Nnamdi Azikiwe University	**Anambra State, Nigeria**
Bachelor of Science (B.Sc.) in Statistics	**Oct. 2011 - Aug. 2015**

First Class (Honors) - 4.57/5.0 Link**(WES** - *3.75/4.0* | Link)
Thesis Title: *Statistical Analysis on the Contributions of Some Economic sectors to Nigeria GDP.*

Relevant Coursework: Design and Analysis of Experiments, Advanced Regression Analysis, Advanced Nonparametric Methods, Operations Research, Stochastic Process, Statistical Inferences, Advanced Sampling Theory, Special Probability Distribution, Advanced Probability Theory, Advanced Multivariate Methods,

RESEARCH EXPERIENCE

Researcher	Nnamdi Azikiwe University	**Anambra State, Nigeria**
Nigerian Statistical Association (NSA)	**May. 2024 – July 2024**

Research Title: Machine learning Model of Student Performance in Statistics Courses.

- Applied Regression Modelling, Random Forest and Extreme Gradient Boosting Machine algorithms to analyze data related to Student Performance.
- Developed a model to predict student performance based on socio-economic factors, attendance records, and previous academic performance.

Researcher	Nnamdi Azikiwe University	**Anambra State, Nigeria**
Nigerian Statistical Association (NSA)	**Jul. 2024 – Nov 2024**

Research Title: An Advanced Approach for Healthcare Facility Functionality Evaluation in Nigeria Using Random Forest and extreme gradient boosting machine Algorithms

- Developed a Machine learning model that classifies the functionality of healthcare facilities in Nigeria, identifying key performance indicators and metrics for evaluation.
- Applied both Random Forest and Extreme Gradient Boosting Machine algorithms to analyze data related to healthcare facility performance.
- Achieved an accuracy of 92% in classification, which helped identify regions with inadequate healthcare services and guided planning for new facilities

Graduate Research	Nnamdi Azikiwe University	**Anambra State, Nigeria**
Department of Statistics	**Jan. 2017- Sept. 2019**

Supervised by: Prof. F. C. Eze
Research Title: Alphabetic optimality Criteria For 2^k Central Composite Design

- Designed an appropriate central composite Design by comparing different central composite designs.

- The various Central composite designs (CCDs); Spherical central composite design (SCCD), Rotatable central composite design (RCCD), Orthogonal central composite design (OCCD) and Face centered cube design (FCCD) were compared for factors k =2 to 6 using the D, G and A criteria.
- The overall results show that G optimality criteria performed better than D and A optimality in different factor levels and replications

Undergraduate Research | Nnamdi Azikiwe University   **Anambra State, Nigeria**
Department of Statistics   **Jan. 2015- July 2016**
Supervised by: Prof. Uzuke Chinwe
*Research Title***:** 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.
- Assessed how each of these sectors contributes to Nigeria GDP and which one plays major role to the Economy

TEACHING EXPERIENCE

Data Science Tutor | Department of Statistics   *Nnamdi Azikiwe University* | **Jun. 2023 - Present**

- Over 380 undergraduates were effectively taught **Introduction to Data Science and Statistics**, supervised, marked, and graded in data science course.
- 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 equipped students with the skills to handle data analysis, visualization, and predictive modeling efficiently

Lecturer | Department of Statistics   *Nnamdi Azikiwe University* | *Sept*. **2019 - Present**

- Undergraduates were effectively taught, supervised, marked, and graded in assignments, tests, and exams by me.
- Correctly prepared and uploaded their results to the university portal. In addition, I taught students in STA 201- Introduction to Statistics I, STA 202- Introduction to Statistics II. STA 331- Analysis of Variance, STA 371- Operation Research, STA 431- Design and Analysis of Experiment and STA 471-Operation Research II

Under Graduate Tutor | Department of Statistics   *Nnamdi Azikiwe University* **| Mar. 2019 - Sept 2019**
- Assisted Prof Happiness Obiorah in tutoring undergraduate students of Statistics Department.
- Conducted workshops and seminars to enhance statistical skills among undergraduate students.

WORK EXPERIENCE

Lecturer I| Department of Statistics   [link]   *Nnamdi Azikiwe University* | *Oct*. **2023 - Present**

- Over 150 undergraduates were effectively taught, supervised, marked, and graded in assignments, tests, and exams by me.

- I also correctly prepared and uploaded their results to the university portal. In addition, I taught students in STA 331- Analysis of Variance, STA 371- Operation Research, STA 431- Design and Analysis of Experiment and STA 471-Operation Research II

Lecturer II| Department of Statistics   link   *Nnamdi Azikiwe University* / *Sept*. **2020 – Sept. 2023**

- Over 200 undergraduate students of botany and zoology were effectively taught, supervised, marked, and graded in assignments, tests, and exams by me.
- I also correctly prepared and uploaded their results to the university portal. I taught botany and zoology students in STA 201- Introduction to Statistics I and STA 202- Introduction to Statistics II.

Assistant Lecturer| Department of Statistics   link   *Nnamdi Azikiwe University* / *Sept*. **2019 – Sept. 2020**

- Over 200 undergraduate students of Agriculture and Microbiology were effectively taught, supervised, marked, and graded in assignments, tests, and exams by me.
- I also correctly prepared and uploaded their results to the university portal. I taught botany and zoology students in STA 201- Introduction to Statistics I and STA 202- Introduction to Statistics II.

Graduate Assistant | Department of Statistics   link   *Nnamdi Azikiwe University* **| Mar. 2019 - Sept. 2019**

- Assisted Prof Happiness Obiora in tutoring undergraduate students in STA371 of Statistics Department.
- Conducted workshops and seminars to enhance statistical skills among undergraduate students.

Mathematics Teacher| PreciousBen International School.   *Kano State, Nigeria* **|** *Sept.* **2010- Aug. 2011**
- Grade 5 students were effectively taught, supervised, marked, and graded in assignments, tests, and exams by me.
- Held Parents' Day were i informed the parents about their kids' performance.
- Prepare lesson materials and writing aids for the students.

AWARDS AND HONOURS

- **Dean of Physical Science award** - *The best-graduating female student, department of Statistics Nnamdi Azikiwe University, Awka.* Link   **2015**
- **Head of Department Award** – *Most Intelligent Female, Department of Statistics Nnamdi Azikiwe University, Anambra State, Nigeria.* Link   **2015**

RESEARCH PUBLICATIONS

- Omeje 1.L, Eze F.C & **Ngonadi L.O (2022),** Choice of Optimality Criteria for the Simplex Centroid Design: *International Journal of Research publication and Reviews,* volume 13, No 11, pp 1819-1823. Link

- Etaga Harrison O, Roseline Chibotu Ndubisi and **Ngonadi Lilian O. (2021),** Effect of Multicollinearity on Variable Selection in Multiple Regression: *Science Journal of Applied Mathematics and Statistics,* Vol. 9, No. 6, 2021, pp. 141-153. Link
- 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. Link
- **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. Link
- **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. Link
- Kayode Hamzat Frederick Omoruyi, Maxwell Obubu, **Omeje Ifunanya Lydia**, Echebiri Udochukwu, Onyekwere Kelechi, Lilian Ngonadi. "Comparison of Some Variable Selection Techniques in Regression Analysis." American Journal of Biomedical Science & Research, vol. 6, no. 4, 2019. Link
- 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. Link
- 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. Link

PROFESSIONAL DEVELOPMENT AND CERTIFICATIONS

- AI fundamentals |DataCamp AI Skill Verification
  2024
- Create Machine Learning Models in Microsoft Azure | Coursera   2024
- Microsoft Azure Machine Learning| Coursera   2024
- Applied Data Science Lab | WorldQuant University, USA | Credly Badge
  2023
- Human Skill Course | Coursera Certificate
  2023

LEADERSHIP AND VOLUNTEERING EXPERIENCE

Undergraduate Student Adviser(200L) | *Department of Statistics, Nnamdi Azikiwe University*   **Jan. 2022- Present**
- Offer mentorship to students with regards to their coursework and academic performance.
- Track student progress and advise them on how best to study and also hold office hours to assist them when faced with academic difficulties.

Volunteer | *PeemanBiz Limited*   **May 2022 – Oct 2023**
- 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.

Volunteer | *Academic Staff Union of Universities (ASUU)*   **2021 - 2022**

- For the 21st National Delegate Committee meeting at Nnamdi Azikiwe University (UNIZIK), i ensured that everyone was well seated and provided all the writing aids to the participants

- I also oversaw the documentation and financial computations for earned academic allowances.

N-power Volunteer | *Amaenyi Girls Secondary School* **2018 - 2019**

- Worked as a mathematics teacher in a high school teaching both 11th and 12th grade students
- Also held office hours for the students and graded their assignments and exams.

Class Representative | *Department of Statistics, Nnamdi Azikiwe University* **2011 – 2015**
- Acted as a liaison between students and lecturers in the Department
- Also made sure all students are aware of assignments deadlines, exams and projects

Volunteer | *Chukwuemeka Odumegwu Ojukwu Teaching hospital, Awka* **May. 2014 - Oct. 2014**
- Collated inpatient and outpatient data daily and effectively analyzed the result at the end of the month.
- Reported my Result and Findings to the Chief Medical Director (CMD) of the hospital

Treasurer | *Nigeria Association of Statistics Student* **2014 - 2015**
- Maintained accurate financial records and balanced budget monthly.
- Allocated funds for different Statistical Projects in the department.

SKILLS

Computational Skills: Proficient in R, Python, Design Expert, LATEX, PowerBI, Excel and Sql.

Administrative Skills: Organizing every data collected and making sure data integrity is maintained throughout the process.

Research Techniques: Data Science, Machine Learning, Experimental Design, Data visualization using PowerBI, and Tableau.

Soft Skills: Excellent communication and teamwork; attention to detail

PROFESSIONAL AFFILIATIONS

- EducationUSA Scholar (***Membership ID****:* G000407) 2021 - 2023
- Member, International Biometric Society (IBS) 2019 - Present
- Academic Staff Union Universities (ASUU) 2019 – Present
- Nigerian Statistical Association   Link 2019- Present