

KEESHA ORLENE NGOMBO MOUELET

PhD student, Engineering in Data Science · Cleveland State University

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EDUCATION

Cleveland State University

Cleveland, Ohio

PhD., Engineering in Data Science | First year, August 2026

First-year doctoral student completing required coursework. Available for research assistantship work alongside coursework and for full-time research thereafter.

Coursework in progress: Data Structures & Algorithms, Biomedical Seminar.

Cleveland State University

Cleveland, Ohio

Master of Science, Statistics and Analytics | GPA: 3.8 | May 2025

Relevant Coursework: Bayesian Analysis, Multivariate Analysis, Advanced Statistical Models, Design and Analysis of Experiments, Applied Regression Models, Probability and Mathematical Statistics

Cape Peninsula University of Technology

Cape Town, South Africa

Bachelor of Science, Mathematical Sciences | December 2019

Relevant Coursework: Calculus I–III, Linear Algebra, Probability and Statistics, Operations Research, Numerical Methods, Statistical Quality Control, Programming, Data Management

TECHNICAL PROJECTS

Code and documentation: <https://github.com/salt4data/predicting-modeling>

Bayesian Analysis of Consumer Purchasing Behavior

Cleveland State University

Bayesian ordinal logistic regression in brms / Stan | 2024

- Applied Bayesian statistical modeling in R to analyze factors influencing consumer decision-making under uncertainty.
- Modeled an ordinal 1–5 outcome across 602 survey responses and 23 variables, specifying informative and weakly informative priors and testing the proportional-odds assumption.
- Validated the fit through posterior predictive checks and sensitivity analysis under alternative priors; found behavioral predictors (browsing and purchase frequency) to outperform demographics in explaining reliance on reviews

Student Sentiment Analysis of a Therapy Dog Program

Cleveland State University

Survey analysis and sentiment modeling | 2024

- Measured how the presence of two campus therapy dogs is experienced by students, staff, and faculty, analyzing roughly 1,300 survey records in a team search using R
- Built the text pipeline, which includes cleaning, tokenization, NRC e.motion-lexicon scoring across ten categories, word-frequency ranking, and cross-tabulation of encounter frequency by campus role.
- Positive, joy, and trust ranked above every negative category; respondents described the dogs as easing academic and personal stress while recognizing limitations of word-level scoring and proposing context-sensitive analysis and LDA.

Student Risk Prediction Model

Cleveland State University

Logistic regression on MATH 87 student records | 2024

- Worked with a student research team to build a logistic regression classifier to flag students at risk of underperformance in MATH 87, handling data cleaning, missing-value imputation, and exploratory analysis of distributions and variable relationships.
- Evaluated the model on classification accuracy and confusion matrix performance.
- Prepared the student records in Python and R, resolving inconsistent coding, missing GPA and attendance values, and derived indicators, then fit and checked logistic regression models to rank the factors most associated with success.

Randomized Experiment: Effect of Music Genre on Exam Performance

Cleveland State University

Randomized complete block design, human subjects · Co-researcher: Tasnia Rahman | 2025

- Designed and ran a randomized complete block experiment with 18 graduate participants, blocked by day of the week, crossing three audio conditions (classical, metal, white noise) with music start time, and holding room, noise, and temperature constant.
- Simulated sample size in advance, fitted general linear models in R and Minitab, and verified assumptions (Ryan–Joiner, Levene) with Tukey post-hoc comparisons.
- Found no significant effect of genre or timing on exam scores and only a marginal effect on completion time, with metal associated with slower completion, reported as a null result.

Predictors of Urban Transit Ridership Across 120 U.S. Metropolitan Areas *Cleveland State University*

National Transit Database 2019 · Built in R Team of three | 2023

- Aggregated and engineered features by urbanized area, then fitted linear models with Box-Cox transformation and stepwise AIC selection, validating specification through VIF and residual diagnostics
- Found per-capita transit expenditure and share of public funding retained as predictors, while population density was not ($\text{Adjusted } R^2 = 0.8878$), qualifying the result as observational and limited to metro areas above 300,000 residents.

Automated Attendance and Reporting Pipeline *Cleveland State University*

Built in n8n | 2026

- Designed and deployed a pipeline that ingests raw scan data, reconciles it against the roster to detect missing records, and triggers automated reporting, replacing manual reconciliation for students per term.
 - Built for data integrity and reproducibility, the same requirements that govern study data management.
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TEACHING EXPERIENCE

Adjunct Instructor

Cleveland State

University

Fall 2023, Spring 2025, Fall 2025, Spring 2026

- Designed and delivered instruction to 200+ undergraduates in mathematics, descriptive statistics, hypothesis testing, regression analysis, and statistical reasoning.
- Developed surveys and assessment tools to evaluate student engagement and learning outcomes.
- Integrated statistical software and applied data analysis activities
- Implemented active learning approaches and real-world applications to strengthen student understanding.

Graduate Teaching Assistant

Cleveland State University

August 2023 – May 2025

- Tutored students in mathematics, statistics, and quantitative reasoning.
 - Supported coursework involving R, Excel, and Minitab; conducted review sessions and individualized academic support.
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PROFESSIONAL EXPERIENCE

Project Analyst

BDPA Cleveland | July 2025 – 2026

- Conducted exploratory data analysis on participant outcome data for AI education initiatives.
- Designed and administered surveys using Qualtrics and Jotform to evaluate learning outcomes and program impact.
- Developed Power BI dashboards and analytical reports to surface patterns in program data.

Statistician Intern

General Directorate of Statistics, Gabon | Feb – Oct 2022

- Conducted data cleaning, validation, and quality assurance on national business registry datasets.
- Supported economic and labor market analyses through statistical classification and reporting activities.
- Produced analytical summaries supporting official statistical publications and decision-making.

Digital Systems Development and Data Analysis Intern

Statistics South Africa | June – Sep 2019

- Assisted in the transition from paper-based to electronic data collection systems.
- Built a prototype digital diary tool using Python and Kivy.
- Evaluated system adoption through survey analysis and user feedback.

METHODS AND TECHNICAL TOOLKIT

Statistical methods: Predictive modeling and classification · Regression modeling and diagnostics (VIF, residual analysis, Box-Cox, stepwise AIC) · Experimental design (randomized complete block, human subjects) · Bayesian inference (priors, posterior estimation, credible intervals) · Multivariate analysis · Survey methodology and scale construction · Natural language processing of open-ended responses · Missing-data imputation

Programming: R, SAS, Python(pandas, NumPy), SQL

Data management: Cleaning and validation of large datasets, Record reconciliation and deduplication, Automated pipelines(n8n), Version control (Git, GitHub)

Reporting: Power BI, Minitab, Excel, Qualtrics, Jotform

Languages: English (Fluent), French(Native)

SERVICE AND ENGAGEMENT

- **Project Analyst and Volunteer, Black Data Processing Associate, Cleveland** - support AI education programming for the local black technology community in the Cleveland area
- **Data Consultant and Translator, African Quantum Consortium (AQC)** - build data pipeline, research to identify the involvement of quantum computing in Africa; provide French technical translation for white papers and articles.
- **Community Outreach Volunteer, Global Cleveland; Cleveland Talent Alliance Ambassador** - Support community outreach and engagement initiatives, welcome newcomers, and help them navigate and connect with the Cleveland community.
- **STEM Mentor and Mathematics Tutor** - Taught high school students mathematics and statistics and served as

CERTIFICATIONS

- Natural Language Processing - DataCamp
- Python and Statistics for Financial Analysis - Coursera
- Python for Data Analysis: Pandas and NumPy - Coursera
- Google Data Analytics Professional Certificate - Coursera

REFERENCES

- Linda M. Quinn, Professor of Practice, Mathematics and Statistics, Cleveland State University | l.quinn@csuohio.edu
- Craig Platt, President, Cleveland Chapter, Black Data Processing Associates | cplatt@bdpacleveland.com
- Gregory M. Lupton, Professor of Mathematics and Statistics, Cleveland State University, Supervisor, G.LUPTON@csuohio.edu