# Olaoluwa Ogunleye

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## EDUCATION

**Clarkson University**                                                                                              *New York*

*PhD, Applied Mathematics*                                                                   **Fall 2021 – Spring 2025**
- Research: Computational Maths, Machine Learning, Data-Driven Science

*MS, Data Science – GPA **3.91/4.0***                                                   **Fall 2022 – Spring 2024**
- Courseworks: Database Management, Data Mining, Machine Learning, Image Understanding

*MS, Applied Mathematics – GPA **3.91/4.0***                                       **Fall 2021 – Spring 2023**
- Courseworks: Statistics, Linear Algebra, Partial DiffEQ, Numerical Analysis, Matrix Computations

**University of Rijeka**                                                                             **Fall 2020 – Spring 2021**

Study Abroad – *Discrete Mathematics and Its Application*                               *Rijeka, Croatia*
- Courseworks: Artificial Intelligence, Graph Theory, Cryptography & Coding Theory
- Honors: Scholarship Awarded by European Union financed through the European Social Fund OPTILIFE project

**University of Lagos**                                                                             **Fall 2014 – Fall 2018**

*BS, Mathematics – GPA **3.70/4.0***                                                                                *Lagos*
- Courseworks: Computational Methods, Data Analytics, Algorithms, Linear Algebra

## SKILLS

- Programming (Python, Java, JS, React, Redux, Visx, R, C++, Go, Django)
- Data Analytics and Visualization (MySQL, Pandas, Numpy, Matplotlib)
- Machine Learning (Text Mining, Recommender Systems, Speech Recognition)
- Applied Maths (Time Series, Numerical Methods, Differential Equations, Probability)

## WORK EXPERIENCE

**BlackRock**                                                                                                     **Summer 2022**

*Software Engineer (Intern)*                                                                                *San Francisco*
- Built a fully functioning backend framework of multiple APIs crunching billions of data, collecting 100,000+ data scores files from appropriate directories, and displaying in real-time corresponding frontend graphical representation
- Developed API for constructing master dataset (data cleaning, time series transformations, aggregations/feature engineering) and front-end panel component for data visualization of time series scores

**Clarkson University**                                                                                          *New York*

*Software Engineering TA*                                                                                     **Fall 2022**
- Led an 8-week intensive software engineering Bootcamp to 30+ graduate students, introducing core programming fundaments - classes, objects, linked-list, hashmaps, queues.
- Collaborating with NSBE (*National Society of BlackEngineers*) and CUGSA (*Clarkson University Graduate Student Association*) to provide Leetcode premium access to students across engineering, data science, mathematics, and physics student

*Machine Learning Researcher*                                                                            **Spring 2022**
- Developed a logistic regression model for predicting mood responses to various exercise types with 97% accuracy
- Performed data cleaning, descriptive and statistical analysis by sex with Nonparametric tests leading to the significant result that females tend to show a higher mood reaction than their male counterparts.
- Collaborated in building a person detection machine learning algorithm with a 98.6% accuracy using the HOG feature

**Utiva Inc**                                                                                                      **Summer 2020**

*Product Manager (Intern)*                                                                                          *Remote*
- Collaborated with UX/UI experts and marketing teams to develop strategies that increased sales and improved product
- Conducted user research to understand user behavior and identify trends in the business.

**Anchor University**                                                                                    **Aug. 2019 – Mar. 2020**

*Research Assistant*                                                                                                     *Lagos*
- Organized regular office hours on applied statistics aiding 20+ graduate students perform statistical analysis of their diverse research work, leading to a 10% increased exposure to multiple interdisciplinary research
- Collaborated with CS and Maths faculty in managing the IEEE conference on the future of computing

**Strategic Outsourcing Ltd.**                                                                            **Summer 2019**

*Data Analyst*                                                                                                            *Lagos*
- Doubled productivity by applying the VLOOKUP function across multiple Excel payroll database systems of over 6,000 employees, co-managed google forms for quarterly staff appraisal & ensured adequate reports filling

## TECH PROJECTS

**Stack:** Python, OpenCV, Sklearn, NLTK, Pandas, Numpy, Matplotlib
- **Face Recognition** (CV): Built a Real-Time Face Mask Detection System predicting whether or not a person wears a mask
- **Spam Detection** (NLP)**:** Developed an SMS classifier that returns with a level of accuracy if a message is spam or not
- **Recommender System**: Built a movie recommendation engine that predicts content based on user's preference

## TEACHING EXPERIENCE

*Teaching Assistant,* **Clarkson University, NY**
- Conducted weekly in-class tutorials to 80+ freshmen on introductory calculus and it's real life applications
- Oganized regular office hours on Linear Algebra, Calculus, Statics and general Maths to undergrad students

*Teaching Assistant,* **Anchor University, Lagos**
- Tutored undergraduate students Fourier Series, Sturm-Liouville theory and Partial Differential Equation
- Facilitated a 3-week coding bootcamp in the University's Laboratory for Interdisciplinary Statistical Analysis (LISA)

Undergrad Teaching Assistant, **University of Lagos**
- Tutored undergraduate students Functional & Real Analysis, Measure & Probability Theory, and Statistics
- Mentored students with poor academic performances, encouraged and motivated them to put in their best

## MATHS PROJECTS & PUBLICATIONS

**Stack:** Time Series, CNN, Statistics, Feature Engineering, Numerical Methods, Image Understanding, Logistic Regression
- Abstract Publication: *Mood Responses to Various Exercise Types Using the Ontological Definitions of Exercise*
- *Data-Driven Prediction of Mood Response to Exercise Types*(Supervisor: Dr. Sumona Mondal)
- Successive Substitution Method – Numerical Analysis (Supervisor: Dr. Olaniyi Iyiola)
- Orthogonal Complements and Minimization Problems (Supervisor: Dr. Olaniyi Iyiola)
- Convolutional Neural Network – Data Driven Science (Supervisor: Dr. Abd Al Rahman Al)
- Logistic Regression: Predicting Outcome of Basketball Game (Supervisor: Dr. Prashant Athavale)
- Image Processing: Application of Matrix Theory and Computation (Supervisor: Dr. Olaniyi Iyiola)
- Some Fixed Point Theorems and Their Applications (Supervisor: Prof. J. O. Olaleru & Dr. Hallowed Olu)
- Successive Over-Relaxation and Ill Conditioned Systems (Supervisor: Dr. Julius Ehigie)

## AWARDS & SERVICE

- Nominated for Clarkson University Phalanx Award for Commendable Leadership and Service
- PhD Scholarship & Teaching Assistantship, Clarkson University
- Scholarship Awarded by European Union financed through the European Social Fund OPTILIFE project
- BS Presidential Award of Academic Excellence, University of Lagos
- Award of Academic Excellence, First Class Foundation University of Lagos
- 2nd Best Graduating Student in Pure Maths option, University of Lagos
- Secretary – Association of Women in Mathematics | President – Student Maths Club
- Member – Clarkson Open Source Institute (COSI) | Member – Google Developers Club

## CONFERENCES & WORKSHOP

- 2022 Workshop on Methods for Three-Dimensional Microstructure Studies – Carnegie Mellon University
- IEEE 2020 Conference on Mathematics, Computer Science & Computer Engineering – Anchor University, Lagos
- Statistical Techniques for Collecting and Analyzing Research Data – LISA 2020 conference
- 2018 endow-Africa Technology Development Workshop on IoT, transport networks & access networks (4G, 5G).
- 2nd International Institutes of Digital Cultures and Scholarships (LSSDH 2018) – University of Lagos
- 2018 KOBO Creative Digital Techies Workshop on Predictive Analytics and Digital Humanities