Ezekiel Adebayo OGUNDEPO

Data Scientist · Statistician · Researcher · Research Software Engineer

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Adaptable data scientist with 10 years of experience in analyzing and interpreting data in a fast-paced environment. He has successfully applied himself across the fields of statistics, mathematics, and computer science. He enjoys wrangling data, building tools, and automating processes. He is good at building relationships across different levels and with people from all social or cultural backgrounds.

Education

Aug. 2017-	**M.Sc. in Mathematical Sciences**
Feb. 2019	African Institute for Mathematical Sciences (AIMS), Rwanda

Oct. 2011-	**B.Sc. in Statistics, First Class Honours**
Aug. 2015	University of Ilorin, Ilorin, Nigeria

Fellowship Programme

2024　　　　　　　**Data Science Fellow**, Global Partnership for Sustainable Development Data

The Capacity Accelerator Network (CAN) Data Science Fellowship, supported by data.org, GPSDD, JPAL, the Wellcome Trust, and GEO-LDN, focuses on leveraging data science for global challenges. I was a key member of the fellowship at eHealth Africa in Nigeria, where I worked on identifying environmental factors driving cholera outbreaks in Yobe State to enhance public health surveillance and response efforts.

2024　　　　　　　**Champion**, rOpenSci

The rOpenSci Champions Program, supported by the Chan Zuckerberg Initiative, aims to increase diversity in open source and research software communities. This 12-month program includes cohort-based training, one-on-one mentorship, project development, and outreach activities. As a Champion, I am contributing to building sustainable and inclusive research software by developing new packages, participating in peer reviews, and engaging in outreach initiatives such as presentations and blog posts to support underrepresented groups in the community.

2018- 2019　　　**Data Enthusiast Fellow** at insight2impact

The DataHack4FI innovation fellowship promotes the use of data analytics to solve challenges experienced by individuals or communities. It encourages Pan-African collaboration by creating opportunities for data enthusiasts and emerging tech companies to partner in developing solutions that address local financial and economic inclusion-related challenges.

2018   **UNLEASH Talent** at https://unleash.org

UNLEASH is a global innovation lab that brings together 1,000 carefully selected young talents from around the world to collaborate on ideas and solutions for the UN Sustainable Development Goals (SDGs). UNLEASH started in Denmark in 2017 and expanded to Singapore in 2018 and Shenzhen, China, in 2019.

Professional Programmes or Certifications

2023   Participated as a CAN Fellow in the Festival de Datos, sponsored by the United Nations, held in Punta del Este, Uruguay. This notable event focused on advancing global data initiatives for sustainable development.

2023   Attended the 10th Heidelberg Laureate Forum (HLF) in Germany as a young researcher in September 2023.

2023   Attended the R Project Sprint 2023 and contributed to the maintenance of R programming at the University of Warwick, United Kingdom (UK).

2022   Collaborative Scientific Software Development and Management of Open Source Scientific Packages, Italy

2022   Nigerian National Code for Health Research Ethics, CITI Program

2022   FAIR Data Steward Certification

Computer Skills

Programming: R and Shiny, Python, SQL, occasionally: JavaScript, HTML, CSS

Business Intelligence: Power BI, MS-Excel and Google Sheets, Lookers

Cloud Platform: AWS, Microsoft Azure, Big Query, SurveyCTO

Documentation: LaTeX, git, Markdown, RMarkdown, Jupyter, sphinx, roxygen, Quarto

GIS tools: ArcGIS, QGIS, R (sf, terra) and Python (geopandas, georasters)

Work Experience

October 2023   **Fellow, Global Partnership for Sustainable Development Data**
April 2024   **(**https://www.data4sdgs.org**)**

Tasks performed

- Conducted baseline research and integrated relevant environmental, climate, cholera, and socio-economic data for cholera outbreak analysis.
- Built and evaluated predictive models using advanced geospatial machine learning algorithms to forecast cholera outbreaks.
- Created and maintained a comprehensive GitHub repository with well-documented code and data sources.
- Predicted cholera incidence across raster cells and presented the project results through a detailed report and slide presentation.

- Developed and delivered training modules in advanced data analysis techniques and version control to enhance team capabilities.

Nov. 2021
July 2023

Senior Data Analytics Manager, 54gene
(https://54gene.com)

Tasks performed

- Developed and implemented advanced data management procedures.
- Oversaw data quality control across multiple sites, ensuring data integrity.
- Monitored data systems to optimize analysis outcomes.
- Ensured data accuracy and adherence to protocols in collaboration with site teams.
- Automated health data analytics, reducing manual dependency by 80% using Google Sheets, App Script, and R.
- Developed the 'bulkreadr' and 'forstringr' R programming packages, designed to enhance efficiency in data reading and manipulation processes.
- Documented statistical methods and programming scripts.
- Conducted training on data operational activities for team enhancement.

Nov. 2019
Nov. 2021

Data Scientist, Data Scientists Network (DSN)
(www.datasciencenigeria.org)

Tasks performed

Bill and Melinda Gates Foundation (BMGF) Project:

- Developed and applied advanced statistical models to analyze data across Health, Education, and Economic Affairs sectors to inform policy and decision-making processes.
- Supervised and coordinated a team of data scientists, ensuring the successful completion of the project.
- Worked with the project manager to develop quarterly and annual reports for BMGF.

Data Science Nigeria Activities:

- Led end-to-end data analytics project for various clients
- Kept abreast of developments in data visualization and advanced analytics/statistical modelling.
- Played a key role in organizing multiple hackathons, including AI for Energy and AI Commons, as part of the mission to develop one million AI talents in Nigeria within 10 years.
- Conducted corporate data science training for Health Strategy and Delivery Foundation staff, focusing on R programming, Advanced Microsoft Excel, and PowerBI.
- Supervised a team dedicated to building Africa's AI ecosystem, creating training content with over 640,000 views on YouTube.
- Contributed to organizing Africa's largest AI Bootcamp in 2019, 2020, and 2021, attracting over 10,000 participants from 30 countries.

May- November
2018

Data Scientist at Planning and Research unit,
Rwanda Revenue Authority (RRA), Rwanda (https://www.rra.gov.rw)

Tasks performed

- Cleaned and analyzed a large volume of the Rwanda revenue data for fiscal policy
- Automated various statistical reports required by different stakeholders
- Built and managed tax revenue data portal for planning and research unit
- Improved the methods of data analysis in RRA
- Trained RRA staff in advanced Microsoft Excel and R programming
- Prepared RRA revenue statistics for publications.

September 2016   **Freelance data analyst, Fiverr Corporation, USA**
November 2019   www.fiverr.com/gbg_analyst

Tasks *perform*

- Expertise in Statistical Consultancy and Data Analysis
- Globally Recognized with Services Rendered in the US, Canada, Germany, and Beyond (12% World Reach)
- Proficient in Web/Data Scraping Techniques
- Advanced Skills in Microsoft Excel: Power Query for Data Cleaning, Pivot Tables, and Charts for Analysis and Visualization
- Custom Dashboard Development Catering to Client-Specific Needs
- Proficient in Interpreting Data from Primary and Secondary Sources Using Statistical Methods
- Advanced Statistical Analysis Utilizing R and Python
- Provided Comprehensive Training on Various Analytical Tools

October 2015   **Research Intern,** Statistics Department
October 2016   Federal University of Technology, Minna, Niger State, Nigeria

Tasks *performed*

- Assisted in delivering lectures on a variety of statistical courses, including Probability, Operations Research, Predictive Modeling, Bio-statistics, Econometrics, and Statistical Computing using R and Python.
- Actively collaborated with team members to ensure timely completion of projects, meeting critical deadlines.
- Spearheaded the collection, cleaning, and analysis of both structured and unstructured data within and outside the university environment.
- Provided expert data analysis and report generation support to PhD candidates and lecturers from various departments.
- Conducted pro bono tutoring for over 100 university students, focusing on data analysis using tools such as Excel, SPSS, and R.

Consultancy/Volunteer Experience

May- June   **Coordinator, AI General Assembly Programme, Thomas Adewumi University,**
   2024   **Kwara, Nigeria.**

In a groundbreaking move to equip graduating students with the necessary skills to navigate the evolving landscape of technology, Ezekiel participated and coordinated the AI General Assembly programme at Thomas Adewumi University, from May 1st to June 28th, 2024. This six-week intensive Data Science and AI Bootcamp promises to revolutionize the skill set of participants across various disciplines, offering them profound insights and practical experience in critical areas of artificial intelligence and data science. The programme is designed to provide hands-on learning experiences and expert guidance to ensure that participants are well-prepared for the demands of the tech industry. For more information, click here.

July- July 2022   **Kobo toolbox developer, 6334 Group, Lagos, Nigeria**

Project Title- Developing an Electronic Data Collection Tool for Minimum Service Package Across all Primary Healthcare Centers in Lagos state, Nigeria.

Tasks *perform*

- Developed questionnaire script using Microsoft Excel via Kobo toolbox
- Tested of tool designed
- Real-time data monitored
- Built capacity for the 6334 team on data collection kit's interface (Kobo collect)
- Error-capture workflow using GIS and STATA

November- Dec 2021   **Coordinator, Johns Hopkins University, School of Advanced International Studies, Washington, D.C; c/o Prof. Chiedo Nwankwor**

Project Title- Report on qualitative analysis of evaluation of two programmes (SGR and WFWI) using three techniques (FGD, IDI, and KII) in three countries (Rwanda, DRC, and Nigeria) for the women's economic development project

Tasks *perform*

- Supervised codebook creation and structured data curation
- Analyzed data for women decision making, women economic independence, women political participation, and women well-being and social welfare in the three countries using the named techniques for both SGR and WFWI
- Documentation of codes and data for the project

October 2020- December 2021   **Data Science Expert, Kampala International University and NUFFIC DISH Project**

Project Title - Improving resilience, access to employment and education, facilitated by e-learning and data sharing in the Horn of Africa

The targeted trainees are hard-to-reach youth and women in and around seven (7) key regions: Tigray region (Ethiopia), Garowe and Mogadishu (Somalia), Kassala and Khartoum (Sudan) and Wau and Juba (South Sudan). The target audience also includes low-opportunity and marginalised youth, including refugees and displaced persons.

Tasks *perform*

- Developed curricula content for Programming with Python (CS 2 1), Introduction to Data Science 1 (CS 2 2), and Introduction to Data Science 2 (CS 3 1)

- Developed the learning materials: print (readable format), videos, audio, etc.
- Developed student-focused tasks/activities, self-review questions, tutor marked assignments, and quizzes (graded and non-graded)
- Managed NUFFIC LMS as a content developer

Leadership Experience

2022 – till date **Project Manager**, IndabaX Nigeria. Overseeing and coordinating all aspects of the event annually, including team management and activity organization. https://indabaxng.github.io.

2019 – till date **Team Lead, UnilorinRUser Group**. An open community dedicated to promoting the R programming language in Ilorin, Nigeria, and supporting the R Consortium initiative. Driving efforts to advance R's use in big data analytics, federated discovery, and applications across business, healthcare, and clinical research. Facilitating continuous collaboration among R users at all levels to foster growth in data science across Nigeria.

2017 – 2018 **Member**, UN Ivy STEM Connect (A program that involved African Institute for Mathematical Sciences (AIMS) and American students from Ivy League universities to improve participation of women in Sciences, Technology, Engineering, and Mathematics (STEM) and in the ultimately male-dominated science market.

2015 – 2016 **Financial Secretary,** Sustainable Development Goals (SDG) Advocate, Bosso Chapter, Minna, Niger state. Nigeria

2014 – 2015 **Welfare Secretary,** Association of Statistics Students of Nigeria, University of Ilorin, Ilorin, Nigeria

Prizes and/or Awards

2024 1st Runner-Up, Meta Llama 3.1 Impact Sub-Saharan African Hackathon (Rwanda) with Team Prometheus, October 10, 2024. Prize: $8,000.

2023 Award of recognition in Data Science by Purpose in Tech, August 12, 2023.

2022 UNESCO-ICTP Travel Award to attend the 9th Workshop on Collaborative Scientific Software Development and Management of Open-Source Scientific Packages, Trieste, Italy.

2022 Exceptional Data Scientist Award by Techtrend Africa, January 12, 2022.

2020 European R Users Meeting (E-RUM) 2020 Travel Grant Winner.

Conferences and Workshops Attended

Oct. 2024	Participated in the Llama 3.1 Impact Sub-Saharan Africa Hackathon in Kigali, Rwanda (October 8–10), organized by AfriLabs in partnership with Meta and the Bill & Melinda Gates Foundation. Collaborated with Testimony Adeyemi, Fareedah Okunade, Naheem Okunade, and Temitope Shokunle to develop Prometheus 1.0, a WhatsApp chatbot enabling small business owners—especially women—to build and launch websites in under 40 seconds, aiming to bridge the 37% gender digital divide.
Nov. 2023	Participated as a Trust CAN Fellow in the Festival de Datos, sponsored by the United Nations, held in Punta del Este, Uruguay, from November 7 to 9, 2023
Sep. 2023	Attended the 10th Heidelberg Laureate Forum (HLF) in Germany as a young researcher, https://www.heidelberg-laureate-forum.org/
Aug. 2023	Facilitated Reproducible Research Using Version Control (Github/Gitlab) at the 2023 Data Science Nigeria Artificial Intelligence Bootcamp. August 14-19, 2023, https://www.datasciencenigeria.org/2023-bootcamp.
Nov. 2022	Participated in the 9th Workshop on Collaborative Scientific Software Development and Management of Open-Source Scientific Packages. Location: ICTP, Trieste, Italy. November 28- December 9, 2022
Dec. 2020	Invited as a panelist to speak on the Data Stewardship Competencies Curricula Development for NUFFIC project at the International FAIR Convergence Symposium. November 27, 2020, to December 4, 2020.
Oct. 2020	Facilitated R programming end to end session at the 2020 Data Science Nigeria Artificial Intelligence Bootcamp. https://rpubs.com/gbganalyst/tidyverse-sample-exam
May 2020	Accepted as a guest speaker at the Next Einstein Forum (NEF) Global Gathering 2020, Nairobi, Kenya
Oct. 2018	CODATA-RDA-ICTP School of Research Data Science. A two-week workshop organized by CODATA on open science and data science research methods. Location: KIST 2 Building, Nyarugenge Campus, University of Rwanda, Kigali, Rwanda. October 22 - November 2, 2018.
Sept. 2018	Kigali Developer Festivals (DevFest) 2018, University of Rwanda, Gikondo Campus. September 29, 2018 Theme: Digital Wellbeing.
May 2018	UNLEASH Global Innovation Lab 2018, NUS, Singapore. www.unleash.org May 30 - June 7, 2018
Apr. 2018	Facebook and Carnegie Mellon University African Cybersecurity Summit, Marriott Kigali, KN3 Ave, Kigali, Rwanda. April 5, 2018.

Contributions (Open-source development)

bulkreadr package: bulkreadr is a user-friendly R package that simplifies importing and processing large datasets. It efficiently reads multiple sheets from Excel or Google Sheets and processes CSV files from a directory. Additionally, it seamlessly imports labelled data from SPSS and Stata, automatically converting coded values to labels, reducing manual effort. This makes bulkreadr an essential tool for data analysts and researchers aiming to save time and optimize workflows. https://gbganalyst.github.io/bulkreadr **Number of Downloads**: 3864

forstringr package: Forstringr enables complex string manipulation in R especially to those more familiar with LEFT(), RIGHT(), and MID() functions in Microsoft Excel. The package combines the power of stringr with other manipulation packages such as dplyr and tidyr. https://github.com/gbganalyst/forstringr **Number of Downloads:** 6782

ralger package: The goal of 'ralger' is to facilitate web scraping in R. The user can extract a vector with scrap(), a tidy dataframe with tidy_scrap(), a table with table_scrap(), and web links with weblink_scrap(). https://cran.r-project.org/web/packages/ralger/index.html **Number of Downloads**: 47k

Big Book of R: The most extensive collection of R books. https://www.bigbookofr.com

Mastering Shiny Solutions: This book offers solutions to the exercises from Hadley Wickham's book Mastering Shiny. https://github.com/r4ds/mastering_shiny_book_solutions

Co-editor: Beginners' Artificial Intelligence & Python Programming Book for Primary and Junior Secondary Schools**.** https://www.datasciencenigeria.org/ai-beginners/

COVID-19 data repository: COVID-19, healthcare facilities, and economic related data in Nigeria, Mendeley Data, https://data.mendeley.com/datasets/8h5rtbbx7m/2

COVID-19 data repository: Location-based Tweets in Africa on COVID-19 Pandemic, Mendeley Data, http://dx.doi.org/10.17632/c8x5tpvzmk.1

Societies Membership

2023	Association for Computing Machinery (ACM)	2018	Google Developers Groups (GDG), Kigali
2023	US Research Software Engineer Association	2018	UNLEASH Global Innovation Lab, Singapore
2019	VODAN Africa & Asia Foundation	2017	Data science of Africa (DSA)
2019	Black in AI	2017	Professional Statisticians Society of Nigeria (PSSN
2018	Data Science Nigeria (DSN)		