DENNIS K. MURIITHI

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SUMMARY

Dennis K. Muriithi is an Associate Professor, Statistician and Lead Data Scientist at the Center for Data Analytics & Modeling in the Faculty of Science and Technology, Chuka University-Kenya. He holds a PhD (Bio-statistics) and MSc (Applied statistics) from Moi University and JKUAT-Kenya respectively. He is a dedicated educator and researcher, recognized as an expert in the field of Statistics. His commitment lies in advancing scientific knowledge, mentoring future scientists, and promoting interdisciplinary research. Prof. Muriithi work primarily focuses on Applied Statistics, Data Analytics, Machine Learning and Artificial Intelligence with applications in Healthcare, Agriculture, Education and Social sciences. He collaborates with both academia and industry partners to tackle real-world challenges using statistical tools. Prof. Muriithi has published many articles in internationally refereed Journals, recipient of several research grants awards and supervised many PhD and MSc scholars to completion and graduation. Prof. Muriithi is a statistical modeler, data euthanistic, Certified Public Accountant and member of Global Applied Malaria Modeling Network (AMMNet) and International Biometric Society (IBS).

ACCOMPLISHMENTS/ACHIVEMENTS

- **TOP 10 BEST RESEARCHER** in Chuka University according to AD Scientific Index. **ID: 4493568**
- **FULL SCHOLARSHIP AWARD to 3** PhD and **2** MSc scholars**)**: Sponsorship for long term training-Food Systems Resilience Project (2023-2029) under my Support and guidance.
- **LEAD APPLICANT AMMNET GRANT AWARD:** Totaling to 6000 USD. https://ammnet.org/funded-local-event-awards/
- **LEAD TRAINER/FACILITATOR:** AMMNET Hands-On Workshop on Malaria Modeling held on 7th-8th August 2025 at CDAM-Lab Chuka University: Github.com
- **FOUNDER AND LEAD DATA SCIENTIST:** Center for Data Analytics & Modeling-Chuka University (2025): CDAM website
- **FACILITATOR:** 2025 Annual AMMNET meeting/Training in Dakar, Senegal. **Titled**: Introduction to R programming & Data Visualization. Github.com : AMMnet website

WEBSITE/PORTFOLIO

Google Scholar

CDAM Website

Github.com

SKILLS

- Statistical Analysis using SPSS, Python, R & Rstudio
- Data Visualization using Power BI, SQL, Tableau, R, Python
- Dashboard Design and Development Process using Business intelligent tools
- Machine Learning and Deep Learning
- Data Analytics Expert and Consultant
- Multidisciplinary research
- Thesis supervision
- Generative AI Modeling

EDUCATION

Moi University
Eldoret, Kenya
Doctor of Philosophy: PhD. (Biostatistics)
2018

- **FACILITATOR:** Project AIEd – UoEm lecture series 2025 **Titled:** Qualtrics: Statistical Data Analysis and AI, Data Export in Qualtrics and Analysis using AI Tools delivered on 11th & 18th March 2025
- **FULL SCHOLARSHIP AWARD (1 PHD):** Sponsorship for long term training - Kenya Climate Smart Agriculture Project (KCSAP) (2019~2023) under my Support and guidance.
- **LEAD TRAINER/FACILITATOR:** AMMNET training Workshop on Malaria Modeling held on 29th-30th August 2024 at Chuka University: Github.com
- **PUBLICATIONS:** Fifty-one (51) publications in internationally refereed Journals: Google Scholar
- **POST GRADUATE SUPERVISION:** 8 PhD and 24 MSc scholars to completion and graduation
- **ATTENDANCE AND CONTRIBUTION:** Thirteen (13) international conferences/workshops/seminars in Kenya, South Africa, Rwanda and Senegal
- **MEMBER**: Applied Malaria Modeling Network (AMMnet) & International Biometric Society (IBS).
- **RESEARCH GRANT AWARD:** Totaling to approximately KES 11,400,000 = $ 85,000 USD

JKUAT
Nairobi, Kenya
Master of Science: MSc.
(Applied Statistics)
2011

KASNEB
Nairobi, Kenya
Certified Public Accountant:
CPA
2009

Egerton University
Nakuru, Kenya
Bachelor of Science:
(Honours)
2007

EXPERIENCE

Committee Involvement
- **Member**, Adhoc Human Resource Advisory Committee, Chuka University
- **Member,** establishment of the Directorate of ICT and AI Center Committee, Chuka University
- **Member,** Staff Establishment Committee, Chuka University
- **Member,** Survey Committee, Chuka University

Associate Professor of Applied Statistics

Chuka University | Chuka, Kenya | October 2023 - Current
- Teaching and evaluation of undergraduate and postgraduate students.
- Setting, moderating, administering and marking examinations.
- Supervising undergraduate and postgraduate students in research activities.
- Developing research proposals for funding.
- Conducting research in the area of my specialization.
- Attending and participating in departmental and faculty meetings and other university committee meetings

Senior Lecturer (Applied Statistics/Statistics)

Chuka University | Chuka, Kenya | June 2019 - October 2023

Lecturer (Statistics)

Chuka University | Chuka, Kenya | June 2016 - June 2019

Internal Examiner (PhD & MSc Thesis)

Chuka University | Chuka, Kenya | January 2018 - Current
- Conducted thorough evaluation of students' dissertations to maintain high academic standards.
- Reviewed and assessed coursework, ensuring alignment with university grading policies.

Research Survey Committee Member (Lead consultant)

Chuka University | Chuka, Kenya | January 2013 - Current
To conduct the following surveys;
- Customer Satisfaction Survey, Chuka University
- Staff Competence/Needs Assessment Survey, Chuka University
- Employees Satisfaction Survey, Chuka University
- Work Environment Survey, Chuka University
- Corruption index survey
- HIV Plan Baseline survey
- Effectiveness of Corruption Risk Prevention Strategies, Chuka University
- Service Delivery Improvement Survey, Chuka University

Data Analytics Expert and Consultants

Freelance | September 2009 - Current
- Data Analysis
- Machine Learning
- Power BI consultant
- Generative AI modeling
- Data Visualization
- Developed excellent working knowledge of industry trends and improvements in processes.
- Demonstrated outstanding product knowledge to achieve high customer satisfaction levels.
- Statistical Modeling
- Customized customer experiences to build brand loyalty.

Board Member
Directorate of Quality Assurance, Chuka University | October 2020 - October 2023

Academic Leader
Garissa University | Garissa, Kenya | September 2020 - September 2023
- Coordinated the development and launch of new degree programmes, assessing market demand and securing necessary approvals.

Patron
Economics and statistics Club, Chuka University | January 2013 - January 2019

Peer Reviewer Member

American Journal of Theoretical & Applies Stats, | January 2016 -

December 2018
- Conducted in-depth reviews and analyses of articles for publication.

Field Operations Officer
Ministry of Planning | Nairobi, Kenya | December 2009 - November 2012

Ass. Monitoring & Evaluation Officer

Ministry of Planning, Kenya | December 2009 - June 2011

RESEARCH GRANTS

- Sponsorship for long term training under Food Systems Resilience Project (**2023-2029**): **Full Scholarship Award** to my Students (3 PhD & 2 MSc scholars)
- **AMMnet Grant** (Lead Applicant): Malaria Risk Prediction in Kenya using Artificial Intelligence and ML Models in R (**2025**) **$ 3,000** (USD). AMMnet Website
- **AMMnet Travel Award** during Annual AMMnet meeting held in Dakar, Senegal, June 25-27 as a **trainer**, Basics: Introduction to R and data visualization.
- **AMMnet Grant** (Lead Applicant): Training Workshop on Malaria Modeling Software's to Develop Practical Skills in Combating Malaria within the Kenyan Context (**2024**) **$ 3,000:** AMMnet Website
- **CU Support Project Grant** (Principal Investigator): Center for data Analytics & Modeling for Short course training, Consultancy services and Research Hub (**2024**) Kshs. **5,450,000**.
- Sponsorship for long term training under the Kenya Climate Smart Agriculture Project (KCSAP) (**2019~2023**); **Full Scholarship Award** to my PhD Student
- **CU internal Research Grant** (Principal Investigator): A study on Optimizing of cucumber growth parameters and Yield to Organic Manure Using Response Surface Methodology and Central Composite Design (**2022~2024**). KShs **700,000.**
- **TU internal Research Grant** (Co-Principal Investigator): A study on Optimization of Biodiesel and Glycerol Production from Mango Seed Oil using Response Surface Methodology and Central Composite Design (**2023~2025**) KShs **200,000**.
- **CU internal Research Grant** (Principal Investigator:): A

study on Modeling and Optimization of Multiple Responses of Watermelon to Organic Manure Using Response Surface Methodology. (**2016~2017**)". KShs **200,000**.

MEMBERSHIP

- **Member-**International Biometric Society, Washinhton DC and Kenya chapter
- Registered Certified Public Accountant of Kenya, ICPAK
- **Member-**Applied Malaria Modeling Network (AMMNet): USA

SELECTED PUBLICATIONS

- Lumumba1. V.W, **Muriithi. D.K** & Monicah Oundo (2025). Evaluating the Performance of Selected Single Classifiers with Incorporated Explainable Artificial Intelligence (XAI) in the Prediction of Mental Health Distress Among University Students, AJAI, 9(2): pp 133-144
- Gitonga. C.K, **Muriithi D.K** & Edna C.T. (2025). Mitigating Demographic Bias in ImageNet: A Comprehensive Analysis of Disparities and Fairness in Deep Learning Models EJ-AI
- **Muriithi. D.K**, Lumumba. V.W, Olawale O. Awe & D. Mwangi. (2025). Explainable Artificial Intelligence for Predicting Malaria Risk in Kenya. EJ-AI, 4(1): PP 1-8.
- Rono. K.K, **Muriithi. D.K** &Mwangi. D.M. (2024). Forecasting Outpatient Visits at Marimanti Level 4 Hospital: Time Series Analysis Using Sarima Model. **I**OSR Journal of Mathematics. 20(5): PP 35-43
- Kiprotich, D., **Muriithi, D. K**., & Njogu, M. K. (2024). Optimization of Groundnuts (Archis hypogeal) Yield through Response Surface Methodology. *Asian Journal of Probability and Statistics*, *26*(10), 95–107.
- **Muriithi. D.K**, Lumumba V.W & Okongo. O.M (2024). A Machine Learning-Based Prediction of Malaria Occurrence in Kenya. *IAJTAS 13(4): pp 65-72*
- **Muriithi. D.K** & Mwangi.V.M (2024). A Machine Learning Approach for Prediction of Surgical Outcomes in Elective Surgery. *IAJTAS 13(3): pp 57-64*
- Micheni. P. K., Gathungu, G. K & **Muriithi, D. K** (2024). Analyzing the determinants and extent of crop diversification among smallholder coffee farmers in Kirinyaga central and east sub-counties, Kirinyaga County, Kenya. J. Agribus. Rural Dev., 2(72), 201–217.

REFERENCES

- **Prof. Mark Okong'o,** Associate professor and Head of Mathematics Section, Department of Physical Sciences, Faculty

of Science and Technology, Chuka University, P. o. Box 109 – 60400 Chuka~Kenya, Email: markokongo@yahoo.com, Tel. +254 726322466

- **Dr.Muchiri. J. Githiria,** Senior Lecturer, School of Mining Engineering, University of the WitWatersrand, Private Bag 3 WITS 2050 South Africa. Email: j.muchiri07@gmail.com Tel: (+254) 703525529 |+27(0) 11 717 7403
- **Dr.Vincent Michael Kiberu,** Lecturer, Department of Epidemiology and Biostatistics, Makerere University, P. O. Box 7072-Kampala Uganda, Email: vkiberu@musph.ac.ug Tel: (+256) 701 431524

LEAD CONSULTANT CONTACT INFORMATION
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Phone: +254724 605 328

Certification:
I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience, and I am available to undertake the assignment in case of an award. I understand that any misstatement or misrepresentation described herein may lead to my disqualification or dismissal by the Client, and/or sanctions by the Client.

Prof. Dennis K. Muriithi (PhD)
Date: 29th September,2025

 Sign: