Tecla Mutave Kyalo

Nairobi, Kenya

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○ Tecla-Kyalo.github.io

PROFILE

I am a diligent and detail-focused student with robust analytical skills and a dedication to academic excellence, driven by a keen interest in Biostatistics.

EDUCATION

African Institute for Mathematical Sciences (AIMS)   **Aug 2023 - June 2024**
Master of Science in Mathematical Science (Distinction)   *Limbe, Cameroon*

Maseno University   **Oct 2018 - July 2022**
Bachelor of Science in Applied Statistics with IT (First Class Honours)   *Kisumu, Kenya*

WORK EXPERIENCE

Eclectics International   **August 2024 - Present**
Data Scientist   *Nairobi, Kenya*

- Developed customer segmentation models based on behavioral and demographic data to improve marketing strategies.
- Implemented hybrid recommendation systems combining collaborative and content-based filtering techniques.
- Built APIs for integrating customer segmentation and recommendation insights into an online client portal.
- Designed and visualized dashboards using Tableau and Power BI to monitor key performance metrics.

Kenya National Bureau of Statistics   **January 2023 - August 2023**
Enumerator   *Machakos, Kenya*

- Conducted data collection on Future availability of food on zones of influence
- Assisted in analysing the data to find a solution for feeding the future
- Applied data visualization techniques to present findings effectively

P & J Commercial Store   **July 2022- jan 2023**
Sales Associate   *Nairobi, Kenya*

- Demonstrated strong interpersonal and communication skills while engaging with customers
- Managed inventory, restocked shelves, and ensured the availability of products for customers
- Developed an understanding of customer preferences, contributing to effective product recommendations
- Collaborated with team members to create a welcoming and organized store environment

St. Patricia International School   **July 2021 - December 2021**
School Clerk   *Machakos, Kenya*

- Responsible for keeping data of the school accounts.
- Registered students in data management systems such as NEMIS, ensuring accurate and up-to-date information.
- Analyzed NSSF payments for employees, ensuring compliance and accuracy in financial transactions.
- Registered employees on the Workpay system, facilitating an efficient and automated payroll process.

RESEARCH AND PROJECT

- ***Logistic Regression on Healthcare Satisfaction***: Applied logistic regression analysis to assess the satisfaction levels of individuals with the healthcare services provided at Masenyo University Dispensary (clinic). Collected and analyzed data to identify factors influencing satisfaction, contributing valuable insights for improving the quality of healthcare services. (*2022,Maseno University*)

- ***Global Development Trends: A Historical Analysis***: Conducted research as part of AIMS 2023, utilizing time series analysis and advanced analytical methods to examine historical global development trends. The study provided valuable insights into the evolving dynamics of global development over time. (*2023, Data Engineering group project-AIMS*)

- **K-Nearest Neighbors and An Application in Diabetic Diagnosis**: Developed a project applying K-Nearest Neighbors algorithm to diagnose diabetes, demonstrating proficiency in machine learning techniques for healthcare applications. (*2023, Machine Learning-AIMS*)

- **Neural Network Implementation from Scratch**: Developed a neural network model from scratch using Python and NumPy libraries. Implemented forward and backward propagation algorithms, along with gradient descent optimization, to train the network to successfully solve the XOR problem. (*2024, Machine Learning-AIMS*)

- **Decision Stump by hand and the overtraining check**: Developed a one-level decision tree (decision stump) using the CART algorithm for analyzing physics data, focusing on classification tasks. Also Conducted overtraining checks and experimented with Decision Tree and Random Forest classifiers to optimize performance and address potential overfitting. (*2024, Machine Learning-AIMS*)

- **Hand-Coded Binary Classifier**: Developed a binary classifier from scratch and applied it for distinguishing electron-showers from hadron-showers in physics data, utilizing depth and width measurements of calorimeter showers. (*2024, Machine Learning-AIMS*)

- **Time Series Data Analysis and Clustering**:Engaged in time series analysis of electricity consumption data(ElectricityLoadDiagrams20112014) , incorporating advanced methodologies such as k-means clustering to segment clients based on their usage patterns. Additionally, applied an ARIMA model in R to forecast future electricity usage.(*2024, High Dimensional Data Analysis-AIMS*)

LEADERSHIP ROLES AND MEMBERSHIPS

Mathematics Club   **2017**
Chair Lady   *St. Angela's Girls' Secondary School*
Statistical Society of Maseno University   **Sept 2021 - July 2022**
Main Secretary   *Maseno University*

SCHOLARSHIPS AND AWARDS

- **AIMS Scholarship** (Funded by MasterCard Foundation) AIMS Cameroon 2023
- **Outstanding Academic Achievement Award [Second Best Student]** Maseno University 2021/2022 Academic year

CONFERENCES AND WORKSHOPS

- **Participant (Machakos- Kenya)**, Feeding the Future- Acquired insights into innovative approaches to gather and analyze data May 2023
- **Participant (Kisumu- Kenya)**, Women in Statistics Conference May 2021

SKILLS

- **Programming Languages** - R programming (Advanced), Python (Advanced), Matlab(Basic), Flask, API design principles (RESTful APIs), JavaScript(Intermediate), Sage Maths (Intermediate), LaTeX Code (Advanced)
- **Statistical Software** - SPSS, Stata, SAS
- **Business Intelligence tools** - Tableau, PowerBI, QlikSense
- **Databases** - Microsoft SQL Server, MySQL, PostgreSQL
- **Planning tools** - Jira, Trello, Click up
- **Graphic Design** - Adobe Photoshop, Canva

Certifications

- **Certificate in introduction to Data Science** CISCO Academy online (2025)
- **Certificate in computer Packages** St. Paul Kipawa Technical Institute (2018)
- **Music festival certificate.** St. Angela's Girls' Secondary School(2016)

LANGUAGE

- **English**   [Fluent]
- **French**   [Intermediate]
- **Spanish**   [Basic]
- **Swahili**   [Fluent]
- **Kamba**   [Fluent]

HOBBY

- **Reading Novels.**
- **Travelling**
- **Playing chess and puzzle games**

REFERENCES

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