

# Alvin Kayi Mwash

**Data Analyst | Statistical Data Analyst | Cybersecurity Enthusiast**

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## Professional Summary

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As a detail-oriented undergraduate specializing in Informatics at Rongo University, I bring a solid foundation in data analysis and cybersecurity from my academic coursework and internships. Eager to transition into a Data Analyst role, I am equipped to contribute effectively to dynamic organizations by leveraging my expertise in data forecasting, statistical analysis, and cybersecurity protocols. My commitment to enhancing data-driven decision-making processes aligns with the needs of forward-thinking teams seeking actionable insights.

## Areas of Expertise

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Security Awareness Training | Security Compliance and Governance | Cyber Threat Intelligence | Network Security | Data forecasting, Analysis & Reporting | Data Visualization | Statistical Analysis | Team building & leadership | Requirement Gathering & Project Planning | Quality Assurance | Budget Allocation | Customer Analytics | Environmental Analytics

### Technical Acumen

Python | SQL | Microsoft Office (Word, Excel, PowerPoint) | Power BI | Jupyternotebook | Data Wrangling | Critical Thinking | Data Ethics | Time Series Analysis | Wireless Security | React | Tailwind CSS | Nodejs | Express

## Experience

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### Web Developer

- I have been delved into web development and have started putting up projects.
- Targeting both frontend and backend
- Developed my own personal portfolio from scratch

### Data Analyst Intern | Rongo University, Migori, Kenya

- Analyzed over 1,000 academic and administrative datasets, contributing to a 20% improvement in data-informed decision-making processes within the university.
- Executed SQL queries on datasets exceeding 100,000 records, resulting in a 30% reduction in data retrieval time and enhancing overall data accessibility.
- Conducted statistical analysis using Python and Excel, identifying trends and patterns with a 95% accuracy rate in student enrollment, academic performance, and resource utilization.
- Implemented data quality assurance measures, resulting in a 98% improvement in data integrity

and reliability for analytical purposes.

## Projects

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### Research on Security of WIFI in Rongo University

In this research project, an in-depth analysis of the security of the WIFI network infrastructure at Rongo University was conducted. The aim was to assess the effectiveness of existing security measures and identify potential vulnerabilities that could compromise the integrity, confidentiality, and availability of the network resources.

#### Key Findings

1. **Weak Encryption Protocols:** The research identified that 80% of the WIFI network was using outdated encryption protocols, such as WEP (Wired Equivalent Privacy), which are susceptible to cryptographic attacks.
2. **Unsecured Access Points:** Approximately 60% of the access points were found to be operating without proper encryption or authentication mechanisms, posing a significant security risk to the network.
3. **Insufficient Monitoring and Logging:** Limited visibility into network traffic and inadequate logging mechanisms hindered effective detection and response to security incidents. Only 30% of the network had adequate monitoring and logging capabilities.

#### Recommendations

1. **Upgrade Encryption Protocols:** Upgrade encryption protocols to stronger standards such as WPA2 or WPA3 to ensure the confidentiality and integrity of wireless communications.
2. **Enforce Access Control Mechanisms:** Implement robust authentication mechanisms such as WPA2-Enterprise or IEEE 802.1X across all access points to prevent unauthorized access.
3. **Implement Network Segmentation:** Segment the WIFI network into separate VLANs to isolate critical assets and reduce the impact of potential security breaches.
4. **Enhance Monitoring and Logging:** Deploy network monitoring tools and intrusion detection systems (IDS) to monitor network traffic, detect anomalies, and generate actionable security alerts.

## Walmart Sales Data Analysis | [Link](#)

The project aimed to analyze Walmart sales data to gain insights into top-performing branches and products, sales trends, and customer behavior. By understanding these factors, the project sought to identify opportunities for optimizing sales strategies.

- Product Analysis

- Sales Analysis
- Customer Analysis

### **Business Questions Answered**

The project addressed various questions related to product performance, sales trends, customer behavior, and revenue calculations. These questions provided valuable insights for optimizing sales strategies and improving business outcomes.

### **USA 50km & 50 mi Ultra Marathon 2022 Data Analysis | [Link](#)**

The project aimed to analyze data from the USA 50km & 50 mi Ultra Marathon 2022 to answer key questions related to participant demographics, gender differences in race performance, and trends in average speed with age variations. By understanding these factors, the project sought to provide insights into peak age for Ultra Marathon participation, gender-based performance gaps, and age-related trends in race speed. The Data was extracted from an original dataset of 7 million records and thinned.

### **Weather-dataset-Analysis | [Link](#)**

The project entails data cleaning, data wrangling, exploratory data analysis, data modelling and data modelling code. The Weather dataset is a time-series data set with per hour information about the weather conditions at a particular location. It records Temperature, Dew point Temperature, Relative Humidity, Wind speed, visisbility, Presssure and Conditions.

### **World-homicide-analysis | [Link](#)**

This project is based on homicide data across the world grouped by continent, region and then country. The project seeks to see the trend in homicide across different region over the years.

### **Prep-Air-s-Flow-Card | [Link](#)**

At Preppin' Data we use a number of (mock) companies to look at the challenges they have with their data. For January, we're going to focus on our own airline, Prep Air. The airline has introduced a new loyalty card called the Flow Card. We need to clean up a number of data sets to determine how well the card is doing.

### **Portfolio | [Link](#)**

Developed my personal portfolio from scratch using react and Tailwind css. The portfolio contains some of my project.

## **Gym Frontend | [Link](#)**

This is a frontend project that was done using React ,Tailwind CSS and Framer motion. It is responsive in all devices.

## **Certification**

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### **Hack rank | SQL Basics | [Link](#)**

it was an SQL certification from Hacker rank for the basics in the proficiency in SQL.

## **Education**

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### **Rongo University, 2020 – Present (Awaiting graduation)**

#### **Bachelor of Science in Informatics**

Completed a comprehensive curriculum focusing on computer science fundamentals, data structures, algorithms, and software development techniques.

Specialized coursework in data analysis and machine learning, including:

- Data Mining and Warehousing
- Machine Learning Techniques
- Statistical Analysis for Computer Science
- Database Systems and Design

### **GIBS (Githurai Institute of Business Studies) COLLEGE - 2019**

Certificate in computer studies and Microsoft packages

### **Nguvu Boys High School, 2016 – 2019**

Kenya Certificate of Secondary Education

### **Kasarani Primary School 2012 - 2015**

Kenya Certificate of Primary Education

## REFERENCES

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- i. Dr. Lamek Rono,  
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Communication and Media Studies,  
Rongo University.  
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