

## PROFILE SUMMARY

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Highly analytical and results-driven Data Scientist with 5+ years of experience specializing in advanced analytics, Machine Learning (ML) model development, and AI-driven solutions. Proven expertise in statistical modeling (regression, clustering, and survival analysis), predictive analytics, and implementing ML algorithms to automate workflows and generate actionable insights. Adept at end-to-end data lifecycle management, from collection and cleaning to advanced analysis, interactive visualization (Tableau, Power BI), and comprehensive reporting. Strong track record of translating complex data into strategic, data-informed decisions for diverse stakeholders.

## TECHNICAL SKILLS

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- ❖ **Programming Languages:** Python (Pandas, NumPy, Scikit-learn, TensorFlow, Matplotlib, Seaborn)
  - ❖ **Data Analysis & Visualization:** Tableau, Microsoft Power BI (DAX), Looker, Advanced Excel
  - ❖ **Machine Learning:** Supervised Learning (Regression, Classification), Unsupervised Learning (Clustering), Survival Analysis, Time Series Analysis, Predictive Modeling, Natural Language Processing (NLP), Deep Learning.
  - ❖ **Databases & ETL:** MySQL, PostgreSQL, MS SQL Server 2019, SQL, ETL Processes
  - ❖ **Data Collection Tools & Survey Tools:** Kobo Toolbox, Qualtrics, ONA, SurveyCTO,
  - ❖ **Version Control:** GIT
  - ❖ **MS Office Suite:** MS Office Suite (Word, Excel, PowerPoint, Access), VBA, Google Analytics
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## Relevant Work Experience

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### **DATA SCIENTIST (PEACE AND SECURITY INITIATIVES) – National Steering Committee (NSC) April 2022 - Present**

- ❖ Developed and deployed Machine Learning models (e.g., Classification algorithms like Random Forest and Gradient Boosting) for conflict area mapping and an AI-driven early warning system, delivering actionable monthly reports to IGAD situation rooms for proactive conflict mitigation strategies.
- ❖ Performed Sentiment Analysis on social media data using Natural Language Processing (NLP) techniques to enhance early warning systems and inform peacebuilding initiatives.
- ❖ Led comprehensive descriptive analysis for the Kenya Peacebuilding Architecture Review across 33 counties (UNDP-sponsored), encompassing end-to-end data collection, cleaning, processing, visualization, and validation.
- ❖ Engineered a streamlined reporting system using Excel Pivot and VBA, reducing processing time by 50%.
- ❖ Developed and automated three monthly process reports using Python, significantly enhancing early warning and response analysis for continuous monitoring.
- ❖ Spearheaded data collection and analysis for a GIZ project, enabling successful stakeholder mapping and drafting of conflict resolution mechanisms.
- ❖ Implemented SQL for robust ETL processes, contributing to a 15% reduction in operational

costs.

- ❖ Automated KPI reporting and created interactive dashboards using Tableau and Microsoft Power BI, providing actionable insights for various state and non-state actors and driving data-driven decision-making.
- ❖ Facilitated key informant interviews (KII) and focus group discussions (FGDs) using advanced tools like Kobo Toolbox to gather critical qualitative data.
- ❖ Translated complex statistical insights into pragmatic tools and recommendations, directly influencing strategic decision-making processes.

**DATA ANALYST OFFICER – Peace net-Kenya      September 2021 - March 2022**

- ❖ Contributed to the "Leave No One Behind" (LNOB) project across 3 counties by executing end-to-end data collection (FGDs, KII), wrangling, and visualization using Tableau.
- ❖ Utilized Python and Excel for advanced descriptive analysis and data preparation, developing interactive Tableau dashboards to ensure high-quality data for comprehensive program evaluation.
- ❖ Developed dynamic program performance dashboards, significantly improving progress monitoring, data-driven decision-making, and program transparency.
- ❖ Collaborated with data engineering to resolve data quality issues, implementing rigorous data validation and cleaning to maintain data integrity.
- ❖ Conducted in-depth analysis of complex data, applying Machine Learning techniques (e.g., Classification models like Logistic Regression and SVM) for effective diagnosis and predictive modeling, enabling proactive interventions and strategic planning.
- ❖ Drafted detailed work plans, quarterly reports, and concept notes, translating data analysis insights into actionable recommendations for program enhancement

**DATA PROJECT MANAGEMENT OFFICER – Partnership for Peace and Security (PFPS)      August 2019 – August 2021**

- ❖ Collaborated with stakeholders to implement comprehensive Monitoring and Evaluation (M&E) plans, leveraging descriptive data analysis techniques.
- ❖ Managed peace and security projects, including SGBV de-escalation initiatives, by applying descriptive analysis, data storytelling, and data visualization.
- ❖ Developed impactful programs, awareness campaigns, and budget proposals, using data-driven insights to support project implementation and sustainability.
- ❖ Established strategic partnerships and conflict resolution strategies informed by predictive analytics and data insights, potentially utilizing clustering models to identify conflict patterns.
- ❖ Participated in Routine Data Quality Assurance (RDQA) processes, ensuring data integrity and reliability through meticulous data validation and cleaning.

**IT TECHNICAL SUPPORT OFFICER – National Cohesion & Integration Commission (NCIC)      July 2018 – July 2019**

- ❖ Provided technical support, managed systems, and resolved IT issues by diagnosing and addressing technical problems effectively.
- ❖ Supported network infrastructure, domain services migration, and IT operations, ensuring seamless connectivity and optimal performance.
- ❖ Installed and configured hardware and software, promptly resolving issues to minimize downtime and improving operational efficiency by over 30% through streamlined processes.
- ❖ Maintained data integrity by manipulating and managing large, complex databases, employing

rigorous data validation and cleaning methods.

- ❖ Designed, developed, and maintained an asset management system, utilizing data analysis to track and optimize resource utilization.
- ❖ Executed data migration projects, ensuring continuity of operations and data accuracy throughout the transition.

#### **DATA CLERK – Independent Electoral and Boundaries Commission (IEBC)**

**June 2017 – November 2017**

- ❖ Assisted in the registration of voters using the KIEMs kit, leveraging data entry and validation techniques to ensure accurate voter information.
- ❖ Conducted data verification of voters' details in the IEBC register, employing descriptive data analysis to maintain the integrity and accuracy of the voter database.
- ❖ Assisted in scanning and relaying election results to the tallying center, utilizing data management and communication skills to ensure timely and accurate reporting.

#### **IT HELPDESK CUSTOMER SUPPORT – National Bank of Kenya (NBK) September 2016 – December 2016**

- ❖ Installed, upgraded, and monitored computer hardware and software, ensuring optimal system performance and reliability.
- ❖ Set up new users' accounts and profiles, and resolved password issues, employing efficient user management and data security practices.
- ❖ Repaired hardware faults and resolved software configuration problems, using diagnostic tools to quickly identify and address issues.
- ❖ Troubleshoot LAN and WAN management, maintaining network connectivity and addressing network-related problems.
- ❖ Diagnosed and troubleshooting desktop system, printer, and operating problems, ensuring timely and effective resolution through technical support.

### **PROJECTS**

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#### **WEATHER & CLIMATE INFORMATION SERVICES DATA ANALYSIS – IGAD CLIMATE PREDICTION CENTRE (ICPAC) Oct – Present.**

- ❖ Conducted comprehensive baseline and needs assessments on drought, riverine, and flash flood impacts in Garissa and Tana River Counties, focusing on vulnerable populations.
- ❖ Managed end-to-end data collection across sampled sub-counties using FGDs, KIIs, household surveys, and Kobo Toolbox, including in high-risk areas.
- ❖ Performed extensive data preparation and cleaning, leading to informed decision-making.
- ❖ Developed interactive dashboards and visualizations in Microsoft Power BI (using DAX, calculated columns, and measures) to uncover key climate insights.
- ❖ Utilized Python to build and automate Machine Learning models (e.g., Time Series Forecasting models like ARIMA/Prophet and Regression models for predicting climate variables) for processing meteorological data from county departments (in partnership with KMD), enhancing early warning systems.
- ❖ Co-designed and co-produced climate information system tools, including a WRF-Hydro model enabling AI-driven weather forecasting and flood prediction for agricultural planning and disaster preparedness.

#### **ROAD ACCIDENT ANALYSIS – NATIONAL TRANSPORT AND SAFETY AUTHORITY (NTSA)**

**Jan 2024**

- ❖ Led a detailed analysis of road accidents using a dataset of over 3,000,000 records, providing actionable insights for stakeholders. Developed visualizations and dashboards to provide

actionable insights for stakeholders.

- ❖ Employed a structured project approach from requirements gathering and stakeholder mapping to raw data overview and analysis.
- ❖ Utilized SQL, Power BI, and Tableau for efficient data connectivity, cleaning, processing, and modeling.
- ❖ Developed and applied Machine Learning models (e.g., Classification models like Decision Trees and Logistic Regression) to identify key factors contributing to accidents and predict high-risk areas/scenarios.
- ❖ Designed and developed dynamic dashboards and visualizations, highlighting key findings and trends based on various Key Performance Indicators (KPIs) and informed by predictive insights.
- ❖ Implemented advanced data cleaning techniques to ensure high data accuracy and reliability for reporting.

#### REVIEW OF KENYA'S NATIONAL PEACEBUILDING ARCHITECTURE- Kenya

May- September 2023

- ❖ Designed and implemented data collection methods using Kobo Toolbox for Kenya's National Peacebuilding Architecture Review.
- ❖ Conducted FGDs and KIIs with key stakeholders across 33 counties, gathering vital qualitative and quantitative data.
- ❖ Analyzed and disseminated findings, providing actionable insights to inform national policy.
- ❖ Led a pilot study to test and refine data collection tools, ensuring accuracy and consistency.
- ❖ Recommended optimal research methods, including questionnaires, FGDs, KIIs, and unstructured interviews.
- ❖ Delivered data-driven reports and recommendations that shaped national peacebuilding strategies which was successfully launched and adopted.

#### SENTIMENT ANALYSIS ON SOCIAL MEDIA PLATFORMS FEEDS – CEWARN Project – Nairobi August 2022

- ❖ Conducted AI-driven Sentiment Analysis (using Natural Language Processing techniques) on over 20,000 social media posts related to the 2022 general elections, utilizing Python for web scraping.
- ❖ Leveraged Power BI and Tableau for comprehensive data exploration and visualization, generating actionable insights for early warning systems.
- ❖ Applied advanced Excel functions for meticulous data validation and verification, ensuring accuracy and consistency.
- ❖ Developed a predictive model using regression analysis, achieving an impressive accuracy rate of 88% and a lift of 34%, providing robust forecasting capabilities.

#### OTHER SKILLS

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- ❖ **Monitoring, Evaluation, Adaptation, Learning, Reporting, and Organizational Development:** Strategic in managing projects and expert in monitoring and evaluation frameworks (results, performance, and logical) and Report writing.
- ❖ **Program Management:** Highly competent in staying current with program changes and progress, advising and recommending tools and strategies to increase program performance and results.
- ❖ **Data Management:** Skilled in collecting data and ensuring the existence of tools and functional systems for the collection, analysis, and synthesis of monitoring data both qualitative and

quantitative.

- ❖ **Research and Analytical Skills:** Capable of determining the best methods for research and data collection, including using questionnaires, focus group discussions, key informant interviews and unstructured interview methods.
- ❖ **Communication and Interpersonal Skills:** Excellent verbal communication skills, effective at interacting and partnership maintaining professional working relationships.
- ❖ **Leadership:** Proven experience in maintaining cordial relationships with team members and partners, and managing a team of workers.
- ❖ **Technical Proficiency:** Advanced knowledge and practical experience with all MS Office suites, including Word, Excel, PowerPoint, and Access, essential for creating reports, presentations, and managing data.
- ❖ **Software Installation and Configuration:** Expertise in installing, configuring, and troubleshooting software applications to ensure optimal performance and user satisfaction.
- ❖ **Network Infrastructure Management:** Experience in managing and supporting network infrastructure, domain services, and IT operations to maintain seamless connectivity and operations.
- ❖ **Hardware and Software Maintenance:** Proficient in diagnosing and resolving hardware and software issues, ensuring minimal downtime and maximum productivity.

### **Education**

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- ❖ **DATA SCIENCE, AI & MACHINE LEARNING :** MORINGA SCHOOL
- ❖ **BACHELOR OF BUSINESS INFORMATION TECHNOLOGY (BBIT):** TECHNICAL UNIVERSITY OF KENYA(TUK) CLASS OF 2016
- ❖ **KENYA CERTIFICATE OF SECONDARY EDUCATION :** KABIANGA SCHOOL CLASS OF 2011

### **Referees**

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- ❖ Chepkirui Milka, Head of Programs (NSC), Mobile No: 0791399020
- ❖ Kubai Kahara, CEO Peace-net Kenya, Mobile No: 0725584032
- ❖ Isaac Munya, ICT HEAD National Cohesion and Integration Commission (NCIC), Mobile No: 0727811216