

JUSTIN TUYISENGE

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Address: KK 32 Ave, Kigali, Rwanda

Professional Summary

Dynamic IT leader with 8+ years of experience in data science, big data analytics, Data Engineering, and systems integration within the electricity utility sector. Currently pursuing an MSc in Big Data Analytics, I excel at transforming complex data into strategic insights, driving operational efficiency, and enabling data-driven decisions. Proven track record of leading cross-functional teams to deliver high-impact technical projects, leveraging advanced analytics, cloud technologies, and AI to optimize grid performance and business outcomes.

Core Competencies

- Big Data Analytics & Machine Learning
- Data Engineering & Real-Time Pipelines
- Business Intelligence & Dashboards
- Team Leadership & Mentoring
- Strategic Planning & Execution
- Cross-functional Collaboration
- Technical Communication
- Process Optimization

Professional Experience

IT Operations Applications Lead

Apr 2022 – Present

REG-EUCL, Kigali, Rwanda

- Architected seamless integrations for utility applications with third-party systems using APIs and microservices, improving system interoperability
- Built AI-driven BI dashboards (Grafana, Power BI, Tableau) and presented complex technical insights to C-level executives through compelling data storytelling

MIS Specialist

May 2018 – Jun 2022

REG-EUCL, Kigali, Rwanda

- Pioneered automation initiatives across business processes through root cause analysis and process optimization, streamlining operations to increase efficiency.
- Designed and implemented robust data governance frameworks using systematic problem-solving approaches, ensuring high accuracy in business-critical data

IT Business Analyst

REG-EUCL, Kigali, Rwanda

Aug 2015 – May 2018

- Translated complex business requirements into detailed technical specifications through effective stakeholder communication, enabling on-time IT project execution
- Developed comprehensive data-driven business cases through analytical thinking and clear documentation, effectively aligning IT projects with strategic utility goals

Key Projects

AI-Driven Load Forecasting Model

2024

Personal/Academic Project

- Developed advanced ML model using Support Vector Regression, Linear Regression and Ridge to predict electricity demand with 92% accuracy
- Applied statistical analysis and model validation techniques to ensure robust performance across different demand patterns

Advanced Metering Infrastructure (AMI) System Upgrade

2023

REG-EUCL Project

- Led data integrity initiatives for national AMI upgrade, integrating Head End System (HES) and Meter Data Management (MDM) through cross-functional collaboration
- Built robust data pipeline using kafka, zookeeper, redis and airflow reducing system latency through technical innovation

ERP Implementation (IFS Applications 9)

2022

REG-EUCL Project

- Spearheaded comprehensive data validation and integration processes through systematic project management and quality assurance
- Created interactive BI dashboards that reduced manual reporting by 40 hours/month, boosting operational efficiency by 10%

Electricity Vending System Implementation

2017 - 2022

REG-EUCL Project

- Directed seamless implementation of the prepaid vending system that serves 95% of utility customers through strategic planning and execution
- Led integration of prepaid vending systems with 12 third-party dealers via REST APIs through effective vendor management and technical communication

Education

MSc, Big Data Analytics (In Progress)

Adventist University of Central Africa

Kigali, Rwanda

2023 – Present

Relevant Coursework: Machine Learning Algorithms, Statistical Data Analysis, Big Data Technologies (Hadoop, Spark), Data Mining, Advanced Database Systems, Cloud Computing.

BSc, Computer Science

University of Rwanda

Kigali, Rwanda

2011 – 2014

Relevant Coursework: Data Structures & Algorithms, Database Systems, Software Engineering, Systems Analysis & Design.

Technical Skills

Data Science & ML: Python, R, Machine Learning, Deep Learning, Statistical Analysis

Data Engineering: Kafka, Airflow, Spark, Hadoop, Elasticsearch, SQL, ETL/ELT Pipelines

Databases: MySQL, PostgreSQL, MongoDB, SQL Server, Apache HBase, Apache Cassandra

BI & Visualization: Tableau, Power BI, Grafana, Advanced Dashboard Development using Python

Certifications

- **IBM Data Science Professional Certificate**, Coursera (2024)
- **Google Data Analytics Professional Certificate**, Coursera (In Progress - 2025)
- **IBM Data Engineering Professional Certificate**, Coursera (In Progress - 2025)
- **Business Systems Analysis Certificate**, University of Cape Town (2017)

Key Achievements

- Successfully led digital transformation initiatives impacting 95% of utility customers
- Served as utility representative in international forums, participating in the development of the Eastern Africa Power Pool (EAPP) market trading platform
- Built data governance frameworks adopted as organizational standards

Languages

Fluent in English, Kinyarwanda, and French

References available upon request