

Wamolambo Lucky Ramasila

MSc (Electronic Engineering)

PDBA (Business Administration)

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Summary

Experienced Data Engineer with a strong foundation in Electrical Engineering and extensive expertise in data analytics, ETL processes, and AI-driven insights. Proven success in building and optimizing data solutions, deploying scalable pipelines, and leveraging cloud technologies. Recognized for delivering impactful data-driven solutions and fostering collaborative team environments

Education

- **Master of Science (MSc) in Electronic Engineering, 2019**

University of KwaZulu-Natal

Key focus: signal processing, statistical modeling, data analysis and visualization

- **Postgraduate Diploma in Business Administration (PDBA), 2020**

University of South Africa

Key focus: economics, accounting, value chain and leadership

- **Bachelor of Technology (BTech) in Electronics Engineering, 2017**

Nelson Mandela University

Key focus: microcontroller design, software design and signal processing

- **National Diploma in Electronics Engineering, 2014**

Nelson Mandela University

Key focus: Digital systems, programming fundamentals and electronic design

Certifications

- Artificial Intelligence in the South African Space, 2022

Issued by: National Electronic Media Institute of South Africa

- Introduction to Data Engineering, 2023

Issued by: Coursera

- Taming Big Data with Apache Spark and Python, 2023

Issued by: Udemy

- Udemy AWS Certified Solution Architect Associate, 2024

Issued by: Udemy

Publications

- Ramasila, W.L. and Xu, H. (2018). Enhanced Maximum Ratio Combiner (E-MRC) Over Nakagami-q (Hoyt) Fading Channels. *Southern Africa Telecommunication Networks and Applications Conference (SATNAC)*.

Focus: This paper introduced an enhancement to the Maximum Ratio Combining technique, tailored specifically for Nakagami-q fading environments. The approach provided improved signal-to-noise ratios, with potential applications in mobile and satellite communications.

- Ramasila, W.L. and Xu, H. (2019). Improved error performance of a 3/4-Sezginer space-time block code. *International Journal of Communication Systems*, 32(13), p.e4013.

Focus: This work presented a novel approach to improving error correction in communication systems through 3/4-rate Sezginer space-time block codes, optimizing data transmission over Nakagami-q (Hoyt) fading channels. This research contributed to enhancing signal reliability in wireless networks, potentially benefiting modern telecommunication standards.

- Ramasila, W.L. and Xu, H. (2019). 3/4-Rate Sedar STBC over a Nakagami-q (Hoyt) Fading Channel. *Southern Africa Telecommunication Networks and Applications Conference (SATNAC)*.

Focus: Explored a new variant of Sedar space-time block coding for optimizing data transmission.

Work Experience

Data Engineer @ Wetility

January 2025 - Present

- Build, Integrate and maintain Pipelines on Azure.
- Manage contractors.
- Design SQL and NonSQL databases.

Data Engineer @ ProQuo AI

December 2023 - December 2024

- Utilized Terraform to describe AWS infrastructure, creating scalable and efficient data engineering systems.
- Extracted and loaded data from various sources using Airbyte, streamlining data integration processes.
- Transformed data using DBT and SQL, managing different data types and formats to ensure consistency and usability.
- Orchestrated data pipelines and Airbyte ingestion with Dagster and Python, optimizing data workflow automation.
- Leveraged Git and GitHub for version control and collaboration on data engineering projects.
- Employed AI tools like CoPilot to enhance code development and productivity.

Key Skills: Terraform, AWS, Airbyte, DBT, SQL, Dagster, Python, Git/GitHub, AI Tools, Snowflake

Soft Skills: Effective writing, Collaboration, Delegation, Project Management, Confluence

Data Engineer @ Openserve

May 2019 - December 2023

- Built and maintained scalable ETL processes using Python 3, Bash, and SQL, optimizing data pipelines for improved efficiency and accuracy.
- Developed and deployed interactive dashboards using Power BI, enhancing data-driven decision-making across the organization.

- Utilized Apache Spark for data transformation and analytics, leveraging DataFrames to streamline data processing.
- Managed network management systems on Linux, contributing to improved system reliability.

Key Skills: Python, Bash, SQL, ETL, Power BI, Apache Spark, Linux, Networking, Java SE

Soft Skills: Communication, Teamwork, Problem-Solving

Researcher @ UKZN

February 2017 – February 2019

- Conducted extensive research on telecommunication models under Rayleigh and Nakagami-q fading using advanced mathematical methods.
- Utilized Matlab to simulate and analyze telecommunication systems, leading to published findings on improved error performance.
- Collaborated with academic advisors and peers, showcasing strong communication, problem-solving, and work ethic.

Key Skills: Mathematical Modeling, Matlab, Research Analysis

Soft Skills: Collaboration, Problem-Solving, Work Ethic

Controls and Drives Technician @ Continental Tires

July 2014 – January 2017

- Developed PLC programs using Ladder and Block coding on Siemens and Beckhoff systems, enhancing production line automation.
- Designed solutions for data transformation using C for semi-structured XML data, optimizing process control operations.
- Troubleshoot electrical issues on machinery, consistently minimizing downtime through effective problem-solving and teamwork.

Key Skills: PLC Programming, Siemens & Beckhoff Systems, C Programming, Troubleshooting

Soft Skills: Teamwork, Problem-Solving, Collaboration

Electronic Technician @ MicroCare

June 2013 – June 2014

- Built firmware for PIC16FXX microcontrollers using C, streamlining electronic system functionality.
- Applied electronic principles for PCB design and troubleshooting on UPS and MPPT units, ensuring high system reliability.

Key Skills: Firmware Development, PIC Microcontrollers, PCB Design & Troubleshooting

Soft Skills: Teamwork, Technical Expertise, Problem-Solving

References

Dallas Goldswain

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Carl Sandrock

Head of Data Science

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Tyson McKeown

Chief Operating Officer

Email: tyson.mckeown@proquoai.com