

# ANELE GUMEDE

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## Summary

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Analytical Mathematical Sciences graduate with a strong foundation in statistics, data analysis, and predictive modelling, gained through academic and industry-linked projects. Experienced in using R, SQL, Excel, and Python to clean, analyse, and model data to uncover patterns and support decision-making.

## Skills and Expertise

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- Statistical analysis and data interpretation
  - Microsoft Excel (data cleaning, formulas, analysis, dashboards)
  - Data extraction and analysis using SQL
  - Database design and querying using SQL
  - Predictive analytics and introductory machine learning concepts
  - Object-Oriented Programming in Python
  - Statistical analysis and modelling using R
  - Data visualisation and clear communication of analytical insights using Excel and R
  - Problem-solving and analytical thinking

## Work Experience

### Data Analyst Intern

01 July 2025 to 31 December 2025

Siyaphumelela – Bellville, South Africa.

- Conducted a predictive analytics project using student academic records to analyse factors influencing time to graduation and academic performance.
- Cleaned, prepared, and explored student datasets using Python and R.
- Applied statistical analysis and predictive modelling techniques to identify key variables affecting student outcomes.
- Evaluated model performance and interpreted results to extract meaningful insights.
- Presented findings clearly using data summaries and visualisations to support academic decision-making.

### Data Analyst Intern

01 July 2024 to 01 December 2024

CPUT – Bellville, South Africa

- Analysed real-world Emergency Department patient data to assess student exposure to critical cases.
- Used statistical methods in R to explore patient severity based on vital signs.
- Conducted descriptive analysis and hypothesis testing (Shapiro-Wilk, Kolmogorov-Smirnov, t-tests).
- Identified significant differences between patient categories, highlighting levels of clinical criticality.
- Interpreted results to support evidence-based conclusions on student clinical exposure.

## **Education**

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**Diploma in Mathematical Science** **January 2022 to December 2024**

Cape Peninsula University of Technology, Bellville, Western Cape

**Advanced Diploma in Mathematical Science** **January 2025 to December 2025**

Cape Peninsula University of Technology, Bellville, Western Cape

## **Projects**

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### **Programming & Database Development Project 2025**

- Designed and implemented a SADC Tourism Management System using Python and Object-Oriented Programming principles.
- Built a South African Insurance Management System using Python, dataclasses, and data validation techniques to model real-world entities.
- Designed an E-commerce and Delivery Database using SQL, including tables, relationships, and constraints.
- Applied structured programming, data modelling, and system design to solve real-world business problems.
- Demonstrated ability to translate problem statements into working software solutions.

## **Certifications**

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- Introduction to Data Analytics
  - Python for Data Analytics
  - Microsoft Azure AI Essentials: Workloads and Machine Learning on Azure
  - Data Reporting and Analysis

## **References**

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- Dr. Farrar T, Acting HOD, +27848596809, CPUT
  - Meyer, J, Mentor, 0219596556, CPUT