GOPOLANG MMUTLWANE

230 Fox Street, City and Suburban, Johannesburg

pantsog24@gmail.com | 0662305349, 0736173625, 0782931034

CV PROFILE

I am a Detail-oriented and passionate BSc in Mathematical Sciences final year student, with a strong focus on data science, software development, and computer science. Equipped with skills in programming, algorithm development, and data analysis, I am eager to apply my expertise in problem-solving, mathematical modeling, and software engineering. I seek a challenging software development or data-driven role where I can contribute innovative solutions to complex technical problems and further develop my technical skillset.

Throughout my academic career, I have gained hands-on experience in C++, Java, Python, SQL, and web development technologies, alongside data science tools and methodologies. My background in both mathematics and computer science provide me with a unique analytical perspective to tackle real-world challenges in software and data science, allowing me to effectively draw insights from data and drive impactful, data-informed decisions.

PERSONAL PROFILE

- **ID Number**   : *9909245355089*
- **Date Of Birth**   : *24 September 1999*
- **Gender**   : *Male*
- **Driver License**   : *Code 10*

EDUCATION

Boitseanape Technical High School | *Grade 12 (Matric)*   **Mafikeng** | *02/2013 – 12/2018*

- **RELEVENT COURSEWORK**   : Mathematics, Physical Science, EGD, Civil Technology

University Of Johannesburg | *BSc In Mathematical Science*   **Johannesburg** | *02/2019 – 11/2025*

- **MAJOURS**   : Pure Mathematics and Computer Science
- **RELEVENT COURSEWORK**   : Statics, Dynamics, Differential Equations, Numerical Analysis, Algorithm Development(C++), Introduction to Data Structure (C++), Object Oriented Programing(Java), Data Communications(Java), Advanced Data Structures and Algorithms(Java), Computer System Architectures(Assembly Language), Application of Calculus, Linear Algebra, Multivariable and Vector Calculus, Sequences, Series and Vector Calculus, Distribution Theory, Statistical Inference, Real Analysis, Discrete Mathematics, Complex Analysis and Abstract Algebra

COURSES

ARTIFICIAL INTELLIGENCE IN THE 4IR   *01/ 2022*

I have developed a basic understanding of the world with AI through this short course. This short learning program will enable me to:

- Develop an understanding of the 4IR and automation.
- Understand the evolution of AI.
- Discuss foundational concepts and techniques of AI and their application to real-life problems.
- Explore advances in AI research, application and commercialization in the United States and the West.
- Explore advances in AI research, application and commercialization in China.
- Unpack the implications of AI for the future of the world of work.
- Be aware of social and ethical considerations of AI technology.
- Reflect on the future of AI for society.

Coding Summer School (CSS) | CHPC & NITheCS   *02/2025*

Jointly organized by the Centre for High Performance Computing (CHPC) and the National Institute for Theoretical Computational Science (NITheCS).

- I gained hands-on experience in Python programming for data science, machine learning, and computational thinking.
- Learned best practices in Python, data pipelines, and data visualization using Streamlit and Jupyter.
- Developed skills in workflow management (ETL), Bash scripting, and exploratory data analysis (EDA).
- Strengthened understanding of probability theory, statistics, and their applications in data science.
- Built foundational knowledge of machine learning and artificial intelligence.
- Applied web scraping techniques and explored real-world applications of data science.

SKILLS

Software tools	Power BI, Tableau, MySQL
ETL Skills	Data Cleaning, Database Management Systems
Programing Languages	C++, Java, Python, SQL, Microsoft Excel, CSS, HTML, Javascript
Analytical & Problem-Solving	Strong mathematical, analytical skills, attention to detail, and troubleshooting abilities
Communication	Writing and Oral Communication: English, Setswana

QUALITIES

- Excellent Communication skills
- Adaptability and able to work independently and in a team environment
- Ability to prioritize and manage time
- Excellent attention to detail
- Critical Thinker and Analytical mindset, easy to understand and identify issues
- Committed to deliver quality services

PROJECTS

- **Pothole detection application:** *For my computer science final year project I had to implement a Pothole Detector program which allows accurate tracking of potholes by using location data to identify areas where potholes are most likely to occur and creating a map of potholes in the town which will make it easy for the municipality to visualize and manage potholes detected Enabling it to calculate the severity of each pothole based on the width and depth of each pothole.*

- **CCT Image enhancer application:** *My second-year computer science project i Implemented a GUI-based client that will send image-based data to a web API and therefore: Use a dilation pre-processor to exaggerate certain features of the image based on a structural element. I use java programing language to implement the project.*

REFERENCES

Mr. J Moreo | *Mathematics Teacher* | 084 466 7713

Mr. I.M Mahlinza | *Civil Technology and EGD Teacher* | 071 241 2010 | Imahlinza@nwed.gov.za

Mr. A Rwizi | *Mathematics Tutor* | 074 729 5464