

Nobesuthu Ngwenya

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EDUCATION

National University of Science and Technology - *Cumulative GPA: 3.5/4.0*

Bulawayo, Zimbabwe

B.Eng, Honors Degree in Chemical Engineering

Graduation: Nov 2024

Relevant Coursework: Calculus, Algebra, Statistics, Computer Science & Programming-Introduction, Visual Programming Concepts

PROFESSIONAL SKILLS

Software: Minitab, SuperPro Designer, Visual Studio, Codeblocks, Adobe Spark

Programming Languages: C, VB.NET, Python (Intermediate)

Core Skills: Data Analysis, Statistical Modeling, Data Visualization

EXPERIENCE

Pretoria Portland Cement (PPC), Process Engineering Intern

Bulawayo, Zimbabwe, Aug 2022 – Aug 2023

Leveraged data analytics and process optimization to enhance cement production efficiency, product quality, and sustainability

- Improved plant performance by implementing data-driven mill circuit troubleshooting techniques, which resulted in a 6% increase in plant productivity
- Processed and analyzed operational data using Excel, identifying inefficiencies and optimizing production workflows
- Conducted root cause analysis on process bottlenecks, reducing plant energy consumption by 4%

National University of Science and Technology, Tutor

Bulawayo, Zimbabwe, Sep 2021 – Sep 2024

- Led personalized and group tutoring sessions in math and ChemE courses for 15 students taking remedial classes, enhancing their comprehension of class material
- Collaborated with a team of 4 tutors to plan and execute local high school outreach initiatives, promoting student interest in STEM
- Utilized Adobe Spark to design marketing fliers, increasing tutees engagement on campus

PROJECTS

Enhancement of Cement Plant Reliability and Throughput

PPCZ Bulawayo Factory, Dec 2022 – Aug 2023

Resolved root causes of reduced plant output volumes using Excel and Python for data collection, cleaning, and analysis

- Utilized Excel and Minitab for monitoring of key process metrics, leading to a 10% increase in plant throughput and improved operational efficiency
- Applied statistical process control techniques in Minitab and leveraged predictive modeling in Python to optimize machine scheduling and forecast potential downtimes

Reduction of Dust Emissions from Cement Packaging Plant

PPCZ Bulawayo Factory, Oct 2023 – Jun 2024

Optimized baghouse system operating parameters using Excel and Python for data extraction, cleaning, and trend analysis

- Leveraged Minitab, Microsoft Excel, and Python to design experiments, perform statistical analysis, and create dynamic visualizations for monitoring system performance and identifying optimization opportunities
- Applied data-driven statistical process control techniques and utilized Minitab for data tracking, achieving a 16% reduction in atmospheric dust emissions and improving environmental compliance

LEADERSHIP

Rotaract Club of NUST, Secretary

National University of Science and Technology, Sep 2022 – Sep 2024

- Scheduled, recorded, and distributed minutes for club meetings, ensuring clear communication of key decisions and action items
- Maintained an up-to-date roster of members, handled correspondence, and ensured timely dissemination of information regarding club activities and responsibilities
- Coordinated schedules, secured venues, and managed event documentation for community service projects, fundraising events and outreach programs

INTERESTS

- Reading. Piano. Hiking. Travel