NICOLÁS BOTERO MORA

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PROFESSIONAL PROFILE

Final-year **Biomedical Engineering** student with strong foundations in **data analysis, programming, and visualization**. Skilled in **Python, Power BI, and MATLAB** for data cleaning, processing, and dashboard development. Experience in **signal processing**, basic **statistical modeling**, and **predictive indicators**. Eager to contribute to **MSD LATAM Global Data Operations** with analytical thinking, data-driven insights, and process improvement.

EDUCATION

B.Sc. Biomedical Engineering – Escuela Colombiana de Ingeniería Julio Garavito & Universidad del Rosario (Bogotá) *2020–2025*

Emphasis on medical informatics, bioinformatics, signal & image processing, and applied statistics.

Cambridge English Certification – Level B2 *2022*

PROFESSIONAL EXPERIENCE

Promotion Monitor – Faculty of Biomedical Engineering *2024–Present*

- Collected and analyzed institutional data; created visual reports for academic/outreach activities (Excel, Power BI).
- Coordinated communication materials and reporting workflows across teams.
- Strengthened analytical thinking, communication, and teamwork in a dynamic setting.

PROJECTS & DATA ANALYSIS EXPERIENCE

Oxygen Flow Control for Respiratory Therapy *2025*

- Designed an automated data acquisition & processing system using **Python** and **Arduino**.
- Built predictive indicators and visualizations to support control decisions.

Biomedical Signal Processing (ECG, SpO_2, Temperature) *2024*

- Wrote Python/MATLAB scripts for cleaning, filtering, and exploratory analysis.
- Developed interactive **Power BI** dashboards to communicate key metrics and findings.

Facial Emotion Recognition Using AI *2024*

- Implemented classifiers in Python (OpenCV, scikit-learn) for emotion detection.
- Reported performance metrics and visualized model accuracy for iteration.

ADDITIONAL TRAINING

- **National Program of Technovigilance – Invima (30h)**: regulatory and safety management of medical devices.
- **Introduction to Artificial Intelligence – Platzi**: ML fundamentals and healthcare use cases.
- **Data Analysis with Python (self-taught/projects)**: pandas, numpy, matplotlib.
- **Power BI for Data Visualization (self-taught/projects)**: dashboards and data storytelling.

TECHNICAL SKILLS

Programming: Python (pandas, numpy, matplotlib), MATLAB, C++, SQL (basic)
Tools: Power BI, Excel (advanced), Jupyter Notebook, VS Code, Git

Competencies: data analysis, ETL/pipelines, visualization, predictive modeling, communication of insights, process optimization.

KEY ACHIEVEMENTS

- Delivered interdisciplinary projects combining **engineering, data analysis, and AI**.
- Built dashboards improving decision-making and process monitoring.
- Recognized for leadership and contribution within the Faculty of Biomedical Engineering.

LANGUAGES

Spanish (native) • English (B2 – Cambridge, 2022) • Strong technical reading/writing.