

GABRIEL SANTIAGO MURILLO BARRAGAN

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Bilingual Biomedical Engineer specializing in Data Science, bridging a unique background in medicine with expertise in Python, SQL, and Machine Learning. Proven ability to translate complex biomedical challenges into data-driven models and AI-powered health technologies. Eager to apply computational skills to a research or data science role focused on solving critical problems in the healthcare sector.

Education

Universidad de los Andes <i>Bachelor of Science in Biomedical Engineering</i>	January 2017 - October 2022 <i>Bogotá D.C., Colombia</i>
Servicio Nacional de Aprendizaje (SENA) <i>Technical Undergraduate with a Specialization in Commerce and Finance</i>	January 2015 - November 2016 <i>Yopal, Casanare</i>
Universidad Nacional de Colombia <i>Foundational medical training aimed at bridging clinical knowledge with data science and biomedical engineering.</i>	July 2022 - July 2025 <i>Bogotá D.C., Colombia</i>

Certifications & Professional Development

- **IBM Data Science Professional Certificate**, IBM
- **Neural Networks and Deep Learning**, *DeepLearning.AI*
- **Introduction to Clinical Data Science**, *University of Colorado System*
- **Python for Everybody Specialization**, *University of Michigan*
- **IBM Data Analyst Professional Certificate**, IBM
- **Project Management Principles and Practices Specialization**, *UC Irvine*

Skills

Programming Languages: Python, R, SQL, MATLAB

Data Science & Machine Learning:

Frameworks & Libraries: Scikit-learn, TensorFlow, PyTorch, Pandas, NumPy, SciPy

Areas of Expertise: Regression, Classification, Clustering, NLP Basics (spaCy, NLTK)

Data Visualization & BI: Matplotlib, Seaborn, Power BI, Tableau, Advanced Excel

Cloud, Databases & Tools: AWS (S3, SageMaker), Docker, Git/GitHub, SQL Databases

Languages: Spanish (Native), English (C1 Certified)

Experience

Fundación de Educación Superior Nueva América (FESNA) <i>Associate Professor in Statistics and Data Analysis Tools</i> <ul style="list-style-type: none">• Designed and instructed comprehensive curricula for virtual courses in Python and advanced MS Excel, focusing on practical business intelligence and data analysis applications.• Developed engaging learning modules, including hands-on projects and interactive activities, to translate complex data concepts into accessible skills for diverse learners.• Cultivated an interactive, results-oriented learning environment across synchronous and asynchronous platforms, mentoring students to achieve course objectives through practical application and continuous feedback.	September 2024 – March 2025 <i>Bogotá D.C., Colombia</i>
Teleperformance <i>Bilingual Supervisor</i> <ul style="list-style-type: none">• Analyzed and visualized team KPIs using Tableau and MS Excel to identify performance trends and inform data-driven action plans.• Mentored and coached a bilingual team of customer service representatives, developing targeted training programs and feedback mechanisms to systematically improve performance against client metrics.• Collaborated with Quality Assurance and Workforce Management to align team strategies with client objectives, ensuring consistent service quality and achievement of KPIs.	January 2023 – September 2023 <i>Bogotá D.C., Colombia</i>
Teleperformance <i>Bilingual Customer Service Representative</i> <ul style="list-style-type: none">• Delivered high-quality customer support for a multinational banking client, resolving complex inquiries and ensuring clear communication in a bilingual (English/Spanish) environment.	June 2022 – December 2022 <i>Bogotá D.C., Colombia</i>
Accounting Technician <i>Topografía Pozos Profundos Aguas Subterráneas LTDA</i> <ul style="list-style-type: none">• Managed the full-cycle accounting process, ensuring the accuracy, integrity, and compliance of all financial records and transactions.• Prepared and analyzed key financial statements (income, balance sheets) to support strategic business decisions.	September 2015 – October 2016 <i>Yopal, Casanare</i>

Academic & Research Projects

AI for Ophthalmic Pathology Diagnosis

Python, TensorFlow, Deep Learning, XAI

- Developed an automated diagnostic system using a CNN (EfficientNetB0) with Transfer Learning to classify retinal fundus images into four pathologies (e.g., Retinopathy, Glaucoma).
- Implemented Explainable AI (XAI) techniques using Saliency Maps to validate the model's clinical relevance by visualizing feature importance.

Falcon 9 Landing Prediction (IBM Capstone)

Python, Scikit-learn, Plotly Dash, SQL

- Led an end-to-end data science project to predict Falcon 9 first-stage landing success, covering the full data lifecycle from multi-source collection (API, Web Scraping) to modeling.
- Performed extensive EDA and developed an interactive dashboard with Plotly Dash to visualize key performance indicators and mission variables.

Epidemiological Modeling of Malaria in Mining Areas

Python, Mathematical Modeling, Simulation

- Designed a metapopulation mathematical model (Ross-McDonald based) to simulate the impact of human migration on Malaria transmission in the Colombian Pacific coast.
- Quantified the correlation between migration rates from illegal mining areas and the proportional increase in infected individuals.