Myllee Mosquera
Mathematical Engineer

CONTACT

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Portfolio: github.com/msmosquerr/Resume

PROFESSIONAL PROFILE

I am a Mathematical Engineer with experience in modeling and simulation, stochastic processes, optimization, data analysis, statistics, and machine learning algorithms, applied to various fields. I am a responsible, perseverant individual with a strong willingness to learn. I am seeking challenging opportunities where I can continue to grow professionally and contribute significantly to the achievement of organizational goals.

EDUCATION

Mathematical Engineer | 2020–2024

EAFIT University. Medellín, Colombia

PROFESSIONAL EXPERIENCE

ENERGY EFFICIENCY INTERN | ISAGEN – Medellín, Colombia | Jul. 2023 – Jan. 2024
- Understand the production variables that affect energy consumption.
- Design, build, and validate predictive energy consumption models.
- Develop machine learning algorithms in Python.

INTERNSHIP TRAINEE | EXFIL SECURITY – Aurora, EE.UU | Jan. 2025 – Present
- Studied fundamentals of networking, operating systems, and information security.
- Identified and analyzed common vulnerabilities based on OWASP standards.
- Simulated attacks in controlled environments using Metasploit, Burp Suite, SQLmap, and others.

INVESTIGATION PROJECTS

Mathematical Modeling for Malaria under Resistance and Population Movement

EAFIT University | March 2022 – May 2022
- Analyze the existence of endemic equilibrium, and develop a solution algorithm in Python for the optimal control problem.

Modeling of a Periodically Forced Pendulum with a Cubic Restoring Force

EAFIT University | July 2022 – November 2022
- Analyze and implement in MATLAB a dynamic model for the physical study of the behavior of a forced pendulum.

Stochastic Volatility and Kullback–Leibler: A Strategy for Portfolio Optimization.

EAFIT University | July 2022 – November 2022
- Propose a method for comparing volatility distributions using Kullback–Leibler divergence to contribute to the improvement of investment portfolio diversification.

Beta Regression Model for Estimating School Dropout Rates

EAFIT University | January 2023 – May 2023
- Design and develop a Beta regression model to predict the proportion of students who may drop out of a particular educational institution, using variables that impact school dropout rates.

Walkability Indices: Integration of Environmental, Social, and Infrastructure Components.

EAFIT University | January 2024 – June 2024
- Build a fuzzy logic–based model to establish a walkability index in various areas of Medellín, addressing both objective measures of walkability and accessibility as well as pedestrians' subjective perceptions and experiences.

ACHIEVEMENTS AND SKILLS

Computer Skills

Python, MATLAB, R, SQL, Java, Burp Suite, Power BI, Excel (Advanced), Office Tools

Speaker – International Conference on Financial Risk

Comité Operativo del VII Congreso | November 2022

Higher Education Scholarship

EAFIT University