David Felipe Medina Mayorga

Advanced Analytics & AI Lead

Contact

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Languages

Spanish – Native
English C1
French B2
German A2

Specialities

♥ Analytics strategy
Agile development
Disruptive design
Mathematical modeling

Programming

Python (8 yr.)
GAMS (8 yr.)
R, Matlab (5 yr.)
SQL (5 yr.)
JavaScript (2 yr.)

BI & BA

PowerBI, Tableau, Qlik,
Microstrategy (4 yr.)

Databases

Azure SQL Server (5 yr.),
MySQL (4 yr.)
MongoDB (2 yr.)

Other Tech

AnyLogic, Arena,
Promodel (6 yr.)
Bizagi Modeler (5 yr.)

Summary

An Industrial engineer focused on processes improvement in organizations through mathematical, data, statistical, simulation, and business modeling. Professional experience with projects for the public-private sector in the last 8 years, leading teams to provide solutions through advanced analytics software applications (decision support systems, machine learning boards, forecasting, and so on).

Formal education

since 2016 — **MSc.** candidate in Applied Mathematics — *National University of Colombia*
Decision making model in networks problems with critical entropy nodes and some of its applications.

2016 — **B.Sc. Industrial Engineer** — *National University of Colombia*
Mathematical model for the distribution of meat products in Bogota and Cundinamarca, Colombia.

Certifications

2019 — **IBM Data Science Professional Certificate** — *IBM - Coursera*

Experience

since 09/19 — **Advanced Analytics & AI Lead - Senior Expert (Colombia & Ecuador)**
Minsait - Indra

Projects:
- Demand forecast and inventory costs minimization in a Commercial and Industrial Refrigeration leading company - Mexico
- Single taxpayer account system in SUNAT - Peru
- C-RESS (COVID-19 Response Surveillance System)
- Electric dispatch optimization model migration in Ecopetrol

Description: Expert Lead overseeing and leading cross-functional projects. Using advanced analytics and analysis modeling techniques to discover insights to guide strategic decisions and uncover optimization opportunities.

Responsibilities:
- Manage different projects along with the organization.
- On-boarding clients and stakeholders, building strong and trusted relationships
- Define and prioritize business requirements specifications with clients and stakeholders (StRS).
- Recruit, train, develop and supervise analyst-level employees, developing a strong team.
- Communicate results and business impacts of insight initiatives to the project's stakeholders.
- Design and implement mathematical, statistical, machine learning and simulation models according to the client's requirements.

08/19 - 10/20   **International Data Consultant** Independent

Description: Expert consultant of mathematical models and data processes to solve complex problems in Big Data, AI, Data Governance, mathematical modeling and so on. *Responsibilities*:

- Define and prioritize stakeholder requirements specifications.
- Design standards tools, best practices, and related Data & Analytics development methodologies inside the clients organization.
- Design mathematical, statistical, machine learning and simulation models according to the client's requirements.

06/18-06/19   **Data Base Modeler Engineer Senior B** Belatrix Software

Projects:

- Business Integration & Analytics CoE
- Benchmark analysis web application
- Expense analysis web application
- Free Trade Agreement analysis web application

Description: Responsible for designing and developing computer databases. Ensure that the delivery of the assignments given matches the client's quality requirements.

Responsibilities:

- Develop High-level project estimation for clients along their data value chain.
- Design standards tools, best practices, and related Big Data development methodologies for clients and inside the organization.
- Identify areas where data can be used to improve business activities.
- Make recommendations for pro-standardization and proper data usage through data analysis

08/17-08/19   **Professor** National University of Colombia

Subject: Stochastic models for manufacturing processes and service systems.

Description: Responsible for preparing course materials and teaching classes to undergraduate students.

03/12-06/19   **Mathematical Modeler & Data Architect** Freelancer

Description: Expert architect of mathematical models and data architectures to illustrate processes and solve complex problems through forward collecting,analyzing and interpreting large amounts of data to identify ways to improve organizations.

02/15-03/18   **Researcher - Modeling team leader** National University of Colombia

Project: Diagnosis of the state of technology and technology assessment and operation processes in the logistics and distribution system in Cundinamarca.

Description: Researcher responsible for developing products to improve several supply chains, such as information systems, mathematical, statistical, and data models.

Responsibilities:

- Provide support and leadership to the team.
- Delegate tasks and set deadlines.
- Specify DSS data requirements and its business processes.
- Design databases for DSS correct execution and the models implemented in it.
- Data processing for enterprise characterization and diagnosis.
- Design mathematical and good practice models for the improvement of systems.

07/16-08/17 **Assistant Director - Operations Management**   Universidad de la Sabana
Master's Thesis with meritorious distinction:
Impact evaluation in service levels for the use of a mobile application for financial clients.

Description: Expert with professional and academic experience who supports the master candidate.

03/12-08/15 **Researcher - Mathematical & Data Modeler**   National University of Colombia
Project: Methodological Proposal for Supply Management Logistics, Distribution and Storage for MSMEs in Colombia.

Description: Researcher responsible for developing products to improve several supply chains, such as information systems, mathematical, statistical, and data models.

Responsibilities:
- Design information gathering tools.
- Specify DSS data requirements and its business processes.
- Design databases for DSS correct execution and the models implemented in it.
- Data processing for enterprise characterization and diagnosis.
- Design mathematical and good practice models for the improvement of systems.

02/14-06/16 **Teaching Assistant**   National University of Colombia
Description: Qualified student to support teaching work.

Subjects:
- Stochastic models for manufacturing processes and services.
- Simulation of manufacturing processes and service systems workshop.
- Logistics.

Presented conferences and workshops

2018 **Congreso Internacional de Industria y Organizaciones - CIIO**   National University of Colombia
Conference: Last mile VRP in Mega cities for perishable foods with compartmented vehicles

2016 **UN Encuentro de Matemáticas 2016**   National University of Colombia
Conference: Distribution models for perishable products

2015 **III Semana de la Ingeniería**   Escuela de Administración y Mercadotecnia del Quindío
- Conference: Complex systems, business and simulation: A multi-paradigm approach.
- Workshop: Introduction to multiparadigm simulation with Anylogic.

Independent projects and collaborations

2020   **Independent Project**
Ethical web scraping in money and wealth metrics.

2019   **Independent Project**
Effects on social network analysis with bots: A case of study.

2018   **Independent Project**
Inside communities development: A socio-economical network analysis.

2018   **Independent Project**
Economic crisis modeling for developed country markets.

2017   **Collaboration**
Coordination mechanisms for optimizing the performance of the humanitarian logistics chain through stochastic modeling. Colombian case.

2017   **Independent Project**
Distribution of money and wealth with finite useful life of agents.

2017   **Collaboration**
DDRP model implementation simulation in a batch production.

2016   **Independent Project**
Analysis of the distribution network of fresh products in Bogotá and Cundinamarca as a complex network

Additional Education

2018   **Azure SQL Database for the SQL Server DBA** (4 hours)   Wormhole - Belatrix

2018   **Microsoft Azure: The big picture** (3 hours)   Wormhole - Belatrix

2018   **Big Data: The Big Picture** (2 hours)   Wormhole - Belatrix

2014   **R programming** (20 hours)   Johns Hopkins University, School Of Public Health

2014   **Model Thinking** (96 hours)   University Of Michigan - Ann Arbor

2013   **Competitive Strategy** (20 hours)   Ludwig-Maximilians-Universität München