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Senior data scientist with solid experience working for multinational companies developing machine learning, predictive modeling, data analysis applications to support decision making process. Strong developing software expertise to deliver advanced data science solutions for problems of strategic importance. Ability to quickly build relationships, collaborate in a multidisciplinary environment with excellent oral and written communication skills to effectively communicate with all levels of management.

Technical skills: Machine learning | Generative AI | LLM | LangGraph | Agnos | CrewAI | Cognite Data Fusion | GCP | Python, Fast API | Streamlit | TensorFlow, Pytorch | SQL, BigQuery, PostgreSQL, Github| OpenAI

❖ Professional Experience

Senior Data Scientist –SierraCol Energy

October 2023.

- Developed and deploy machine learning models to strategically support well exploration initiatives, contributing to enhanced decision-making processes and operational efficiency from 53% to 73%.
- Created an NLP-based model for classifying daily drilling operations and implementing ETL to transfer data from Ecopetrol's OpenWells to Sierracol, resulting in savings of 120.000 usd annually and compressing months of work into hours.
- Developed a machine learning model integrated with a Mixed Integer Programming (MIP) optimization model to predict and optimize power consumption at a power plant in a Colombian oil field, with projected annual savings of approximately \$270,000 and reduced carbon emissions by 369 tons annually.
- Developed an anomaly detection model to create alerts over production and pressure time series in Colombian oil field.

Senior Data Scientist – BNP PARIBAS CARDIF

September 2022 to March 2023.

- Implemented machine learning models to predict the purchase probability in order to design the best telemarketing strategy to sell insurance products.
- Developed anomaly detection with autoencoders to predict best insurance product to offer.
- Conducted data analysis to design the strategies to improve the contact rate on telemarketing services.
- Developed capacity optimization model to design a schedule to improve contact rate of telemarketing with Python and ORTOOLS.
- Designed clustering risk model to define the price of insurance product.
- Conducted design of experiments to follow up on Machine Learning models.

Senior Data Scientist – TRANSMILENIO S.A.

September 2021 – September 2022

- Developed data models, reports and dashboards to track and manage operational indicators based on information provided by 20,000 vehicles through their intelligence transportation systems.
- Conducted a computer vision pilot project to evaluate the service level of public transport system in collaboration with Inter-American Development Bank-IDB.

Senior Data Scientist – GRUPO ALTO

December 2018 – September 2021

- Designed analytics solutions for corporate customers in USA, Spain, Mexico, Chile and Colombia producing savings in time to build reports from weeks to minutes.
- Develop a sentiment analysis tool to identify and alert about operational issues with automatic tasks that allow the management team to resolve it in real time.
- Built statistical and geo-referenced reports to support customer's operation of USA, Spain, Mexico, Chile and Colombia.

Strategic Advisor – CEINTE SA

April 2018 – August 2018

- Led the financial and strategic business transformation of Grupo de Energia de Bogotá S.A ESP through the design of business processes and procedures with detailed process flows, including clearly defined hand-offs and control.

Business Data Analyst – Grupo de Energia de Bogotá S.A ESP - GEB

October 2013 – September 2017

- Conducted monthly data analysis based on financial and operational outcomes to support effective decision-making of management team.
- Built financial model to make economical proposal for Colombian power transmission projects (estimated capex of **USD 1 Bn**)
- Led the process to sale the GEB's stock shares in ISAGEN to Brookfield. ISAGEN is the second largest power generation company in Colombia (estimated capex of **USD 94 Mn**)

Strategic Data Analyst – National Ministry of Defense

June 2012 – October 2013

- Developed key performance indicators to monitor the execution of the defense strategy.
- Built data analysis based on security information to monitor the evolution of security conditions.

❖ Education

Generative AI For Natural Language Processing Program

GreatLearning | April 2024-August 2022

PGP in Artificial Intelligence and Machine Learning

The University of Texas | September 2021-June 2022

Master's Degree in Engineering – Operation Research and Statistics

Andes University | April 2009-April 2012

Industrial Engineering

Libre University | July 2004-March 2009

English Language

NCG College, Liverpool, UK | September 2019-January 2021

❖ Courses and seminars

- Generative AI for Natural Language Processing | Great Learning | 20240401-Currently
- Programación para desarrollar IA – Universidad de los Andes - 2023
- Customizing your models with TensorFlow 2 – Imperial College London 2023
- Getting started with TensorFlow 2 – Imperial College London 2023
- Entrepreneurial Thought & Action - Babson College 2021
- SAS Programming – Essential. 2018