DANIEL AUGUSTO MUÑOZ VIVEROS

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Portafolio

Data Scientist specializing in advanced analytics and AI. Experienced in predictive modeling, statistical analysis, and data visualization using Python and SQL to optimize processes and support strategic decisions. Committed to continuous learning and driving business intelligence.

Education

Master of Science in Information Processing
Universidad Autónoma de Zacatecas | August 2024

Electronic and Telecommunications Engineering
Universidad del Cauca | July 2022

Professional Experience

Research Assistant (Data Science) at Universidad Autónoma de Zacatecas
Zacatecas, Mexico | August 2022 – *present*

- Evaluate vaccine coverage, the occurrence of adverse effects, and the immune response following COVID-19 vaccination, applying machine learning techniques to identify significant relationships and support public health decision-making.
- *Conducted identification factors that influence antibody levels in post-COVID-19 patients with a public health approach, determining significant clinical risk Factors.*
- Presented research findings at international conferences, focusing on applications in data analysis and machine learning predictive models.
- Analyzed data from the Immunotoxicology Laboratory at the Universidad Autónoma de Zacatecas using Python to develop predictive models, identifying key determinants in post-COVID-19 antibody response.
- Applied MLOps practices in the development of predictive models, using MLflow for experiment tracking, version control, and metric management, enhancing traceability and reproducibility in studies on post-COVID-19 antibody response.

Freelancer as Data Scientist at UpWork
México (Remote) | January 2024 – March 2024

- Validated and corrected SQL queries to ensure data integrity, contributing to the reliability of the analyses performed.
- Developed solutions to export data using ERP APIs, improving data integration and accessibility.
- Organized, transformed and cleaned data, allowing for detailed and consistent analysis in prediction projects.

Jr. Developer at JOMI
Colombia (Remote) | February 2023 – December 2023

- Contributed to the development of multiple web development projects, both front-end and back-end, improving the user experience.
- Responsible for the creation and maintenance of databases and the implementation of business logic in Python, optimizing data management.

Data Scientist (Project Member) at DS4A Colombia – Correlation One and MinTic Colombia
Colombia (Remote) | March 2022 – July 2022
- Developed a weekly sales forecast model using ARIMA with Python, accurately predicting sales peaks to optimize resource allocation and operational planning for a delivery and shipping company in Colombia.
- Performed data cleaning, exploratory data analysis and feature engineering with Python, utilizing Plotly for interactive visualizations to uncover seasonal trends and key correlations.

Undergraduate Researcher at Universidad del Cauca
Popayán, Colombia| August 2019 – July 2022
- *Developed a system using machine learning and computer vision for granulometric analysis of gravel, reducing execution time by nearly 5 times while maintaining precision.*
- Led the research project, organizing a work plan, delegating tasks, and ensuring objectives were met on time.
- Adapted to unfamiliar research topics, demonstrating problem-solving skills and quickly mastering new technologies as machine learning and computer vision with Python.

Projects (Implementations)

Multiclass Prediction of Cirrhosis Outcomes
Link Project | April 2024
- Developed a predictive model using XGBoost to classify liver cirrhosis outcomes, enhancing performance through advanced hyperparameter tuning.
- Containerized the model with Docker and deployed it on AWS Lambda for scalable and efficient execution.
- Achieved over 90% accuracy, sensitivity, and specificity, validating the model's effectiveness with rigorous performance metrics.

Human Stress detection in and Through Sleep
Link Project | February 2024
- Developed a machine learning model to accurately detect human stress levels during sleep, leveraging physiological data for enhanced prediction accuracy.
- Containerized the model using Docker, ensuring a reproducible development environment and streamlined deployment process.
- Deployed the solution on AWS, achieving high scalability and operational efficiency for real-time stress monitoring.

Technical Skills

- Machine Learning: Predictive model development, complex data analysis, MLOps
- SQL management (MySQL, PostgreSQL)

- Data Science: Data analysis, data manipulation, statistical analysis, advanced visualization (Python, RStudio)
- Programming Languages: Python (Pandas, TensorFlow, Keras, NumPy, SciPy, Scikit-learn, Matplotlib, Plotly), RStudio
- Containers: Docker
- Cloud: Amazon Web Services (AWS)
- Others: PowerBI (Data visualization, Interactive dashboards), Mlflow (Tracking models), Prefect (Orchestration)

Languages

- Spanish: Native
- English: Advanced

Courses & Certifications

- *AWS Certified Cloud Practitioner – Amazon Web Services (2025)*
- *MLOps: Despliegue de Modelos de Machine Learning – Platzi (2025)*
- *AWS Cloud Practitioner Essentials – TIDWIT LATAM (2025)*
- *PowerBI – Santander Open Academy (2025)*
- *SQL Masterclass: SQL for Data Analytics – Udemy (2025)*
- *Machine Learning Zoomcamp – DataTalksClub (2024)*
- *AWS Cloud Practitioner Essentials and Mentorships – Fast Lane LATAM (2023)*
- *Data Science for All / Colombia – Correlation One & MinTic Colombia (2022)*
- *Data Scientist – DataCamp (2021)*
- *Data Analyst – DataCamp (2021)*