Valeria Pineda Romero

DATA SCIENTIST

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Personal Profile

A Master of Science in Engineering with a team-oriented mentality and 3 years of hands-on experience implementing **machine learning models** for projects in education, warehouse operations, and business research. Knowledgeable about **data science**, **optimization problems**, **operations research**, and **report writing**. Primarily, looking for **Data Scientist/Data Analyst** roles.

Work Experience

Resideo
San Luis Potosí, Mexico

BI Analyst
Dec 2022 - Present

- Developed a Customer Churn Prediction Model with a recall of 95.8%, which enabled the business to target and apply retention strategies to reduce churn significantly.
- Assist the team in the creation and modification of Sales Reports using Microsoft SQL Server and SSRS Report Builder.
- Support in the generation and modification of a dashboard, using WebFocus BI Portal, which helps in the efficient identification of factors that are impacting the business.
- **Technical Skills:** Python with Jupyter Notebooks, NumPy, Matplotlib, Pandas, Scikit-learn, SQL, JavaScript, HTML, WebFocus, SSRS
- **Soft Skills:** Time Management, Communication, Presentation skills, Report writing, Problem-Solving Thinking.

Tecnologico de Monterrey
Monterrey, Mexico

Teaching Assistant
Aug 2021 - Dec 2021

- Developed basic data science activities on data visualization, exploratory data analysis, and linear regression analysis using Jupyter Notebooks.
- Assisted the School of Engineering and Sciences with grading 31 students on data analytics and optimization activities.
- Supported the writing of a literature review on "Models for Logistics Network Design and Optimization".
- **Technical Skills:** Python with Jupyter Notebooks, NumPy, Matplotlib, Pandas, Scikit-learn

Education

Tecnológico de Monterrey
Monterrey, Mexico

MSc in Engineering - GPA: 4.0/4.0
Aug 2020 - Jun 2022

Courses: Data Science, Multiple Linear Regression, Machine Learning, Intelligent Systems, Data Analytics, Computing Fundamentals.

Tecnologico de Monterrey
San Luis Potosi, Mexico

B.S. in Industrial and Systems Engineering - GPA: 3.7/4.0
Aug 2016 - Jun 2020

Courses: Statistics I, Statistics II, Optimization Models, Design and Analysis of Experiments, Statistics Engineering, Decision-Making Models

Relevant Projects

Factors to improve online education, a study on the impact of COVID-19 on Delhi students
Monterrey, Mexico

Tecnológico de Monterrey
Feb 2022 - Jan 2023

- Applied a machine learning classification model capable of identifying New Delhi students' main demographic and behavioural factors that affect their online class experience during COVID-19, with a ROC AUC score of 0.837.
- **Research Publication:** V. V. Pineda-Romero, C. E. Orozco-Mora and H. G. Ceballos, "Factors to improve online education: A study on the impact of COVID-19 on Delhi students," *2023 Future of Educational Innovation-Workshop Series Data in Action*, Monterrey, Mexico, 2023, pp. 1-8, doi: 10.1109/IEEECONF56852.2023.10104773.
- **Technical Skills:** Python with Jupyter Notebooks, NumPy, Matplotlib, Seaborn, Statsmodels, Pandas, Scikit-learn, XGBoost, LaTeX, SHAP.

Prediction of occupancy levels in enclosed areas: A classroom scenario
Monterrey, Mexico

Tecnológico de Monterrey
Sept 2022 - Dec 2022

- Applied an SVM model to estimate a classroom's four occupancy levels (i.e., empty, low, medium, and high) using the temperature, humidity, and pressure values of 5 different tables in the area. The results show that the methods used to predict occupancy levels achieve an accuracy of at least 93.54%.
- **Technical Skills:** Python with Jupyter Notebooks, Pandas, Numpy, Scikit-learn, Seaborn, Matplotlib, Imbalanced-learn, SciPy.

A data mining-driven storage policy to improve order-picking efficiency
Queretaro, Mexico

Tecnológico de Monterrey
Nov 2021 - Jun 2022

- Clustering data-mining techniques were used to develop three class-based storage strategy configurations, for a Mexican retail company, which enabled a reduction of up to 11.33% on the order-picking traveling distance.
- **Technical Skills:** Microsoft SQL Server, Python with Jupyter Notebooks, NumPy, Matplotlib, Seaborn, SciPy, Statsmodels, Pandas, Scikit-learn, LaTeX.

Solution for the Precedence-Constrained Picker Routing Problem using Genetic Algorithms
Monterrey, Mexico

Tecnológico de Monterrey
Sept 2020 - Jun 2022

- Inspired by the order-picking process of a Mexican retail company, a Genetic Algorithm was used to generate picking sequences that increased the overall process efficiency by 30.2%.
- **Technical Skills:** Microsoft SQL Server, Python with Jupyter Notebooks, Gurobi Python, Pandas, Numpy, Matplotlib, LaTeX.