

# Valeria Pineda Romero

DATA SCIENTIST

ATLANTA, GA.

+52 444-548-1163 | vv.pinedaromero@gmail.com | vpinedaromero.com | github.com/ValeriaPineda23 | linkedin.com/in/valeria-pineda-romero

## Personal Profile

A Master of Science in Engineering with a team-oriented mentality and 2 years of hands-on experience implementing **machine learning models** for research projects in education and warehouse operations. Knowledgeable about **data science, optimization problems, operations research, and report writing**. Primarily, looking for **Data Scientist/Data Analyst** roles.

## Work Experience

### 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

### BMW Group

San Luis Potosi, Mexico

Floor Walker

Jan 2019 - Jun 2019

- Reduced time delay of supply to line process by 52% through time series analysis and monitoring warehouse operations.
- Supported Supply Chain processes such as material flow, supply to line, warehouse management, and IT issues performing exploratory data analysis of the company's operational datasets in SAP STARD ERP.
- Technical Skills:** Microsoft Excel, Microsoft PowerPoint.

## Relevant Projects

### Prediction of occupancy levels in enclosed areas: A classroom scenario

Monterrey, Mexico

Tecnologico de Monterrey

Sept 2022 - present

- 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.

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

Monterrey, Mexico

Tecnologico de Monterrey

Feb 2022 - present

- 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.
- Technical Skills:** Python with Jupyter Notebooks, NumPy, Matplotlib, Seaborn, Statsmodels, Pandas, Scikit-learn, XGBoost, LaTeX, SHAP.

### A data mining-driven storage policy to improve order-picking efficiency

Queretaro, Mexico

Tecnologico de Monterrey

Nov 2021 - present

- 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

Tecnologico 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.

## Education

### Tecnologico 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

## Skills

### Machine Learning

Classification, Regression, Clustering, Time Series Analysis, Feature Engineering, Data Visualization, Exploratory Data Analysis.

### Statistics

Regression, Confidence Intervals, Hypothesis Testing, Outliers Analysis, Goodness of Fit Test, Descriptive Statistics.

### Languages

English: Professional proficiency; Spanish: Native proficiency