# **ALEJANDRO VARGAS**

# **DATA SCIENCE**

# CONTACT



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## SKILLS

- Python, R
- Pandas, Polars, Numpy
- PyTorch, Tensorflow, scikit-learn
- Seaborn, Plotly, Shiny, Streamlit
- Azure ML, AWS
- SQL, PostgresSQL
- HTML/CSS
- Selenium, Scrapy

#### INTERNSHIPS

2022/08 - 2022/10 UNICAMP

Noise Properties in the GPS/GNSS Time Series of San Juan Permanent Stations 2022 - 2023 CICITCA Scholar | UNSJ

Geophysical Characterization of the Crust in the Region of Major Unconventional Hydrocarbon Exploration in Argentina 2020 - 2021

CIN Scholar | UNSJ

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Data enthusiast passionate about leveraging data to drive innovative and impactful business solutions. Adept in data collection, preparation, analysis, visualization, and modeling using leading Python and R libraries. Quick learner with a strong aptitude for problem-solving, eager to contribute to a dynamic and collaborative environment.



# PROJECTS/EXPERIENCE

#### **E-commerce Recommendation Engine**

Python · TensorFlow · pandas · numpy · seaborn · plotly · Optuna

This project showcases the end-to-end implementation of a deep learning-based recommendation system built on the top of TensorFlow Recommenders. It leverages user interaction data from an e-commerce platform to model user preferences, achieving an average accuracy of 55% in predicting the correct product within the top 50 recommendations.

- Demo: <u>huggingface.co/spaces/sagravela/ecommerce-recommendation-system</u>
- Repository: github.com/sagravela/recommendation\_system

#### **Sales Time Series Forecasting**

R · tidyverse · fable · tsibble · purrr · Shiny

Forecasted over 3,500 time series for various products across multiple stores, applying advanced forecasting models such as ARIMA and STL+ETS. Forecasted data was integrated into an interactive dashboard, enabling real-time visualization and data-driven decision-making for enhanced inventory and sales strategy.

- Demo: sagravela.shinyapps.io/salesforecastr
- Repository: github.com/sagravela/salesforecastr

#### **AltScore Kaggle Competition**

Polars · XGBoost · LightGBM · CatBoost · SHAP

Data collection from different sources, data cleaning, feature engineering and aggregations of provided and external data. Training and evaluation of ensemble tree-based model with posterior inspection and explanation. Reached top 5 in the public leaderboard.

- Competition: <u>kaggle.com/competitions/alt-score-data-science-competition</u>
- Repository: <u>github.com/sagravela/altscore-kaggle-competition</u>



# **EDUCATION**

## Bachelor's degree of Geophysics

FCEFN | UNSJ

**GPA:** 8.68 / 10.0

# Relevant courses:

- · Linear Algebra
- Statistics
- Calculus 1-3
- Programming
- GIS tools and Geospatial Data Analysis

2016 - 2023