

## Education

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**Bachelor of Economics**

2017-2021

Universidad Panamericana, Ciudad de México

CDMX

**Microsoft Certified: Azure Data Scientist**

2022

Microsoft Learn

Online

**Natural Language Processing with Python**

2022

Udemy

Online

**Data Politics**

2021

Universidad Panamericana, Ciudad de México

Online

**Political and Economic Summer Program**

2018

London School of Economics

London

## Experience

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**Enable Global**

2023-

Semi Sr. Data Scientist

- Spearhead data science projects focused on Operational Technology (OT) data solutions to drive business outcomes. Communicate findings and results to stakeholders.
- Lead a comprehensive analysis to identify the root causes of defective steel pieces in the transformation process for a chassis fabricator, using several techniques like ANOVA, Anomaly Detection, Parametric and Non-Parametric tests. This analysis helped our client detect the causes and address them by installing a new heater system.
- Engineered and implemented an automated data quality web app using Python, incorporating cosine similarity algorithms and clustering techniques for robust deduplication. Leveraged Pydantic for data validation and schema enforcement. This application has been used for cleaning master and spare parts data for several manufacturers

**Entropia AI**

2021-2023

Data Scientist

- Use state-of-the-art (SOTA) models, and cloud technologies like AWS and Azure to deliver high value. solutions to clients across a diverse range of industries.
- Create understandable dashboards with Dash as deliverables and end-to-end Data Science solutions.
- Act as Product Manager for several projects, leading a team of data analysts and scientists to deliver results on time and within budget.
- Deployment of models using Prefect for data pipeline workflow orchestration framework and an inference service using AWS ElasticBean for sales and demand forecasting.
- Architected and deployed a production ready Almost Ideal Demand System (AIDS) model, translating advanced economic theory (Deaton & Muellbauer, 1980) into a real-time production system. Implemented an automated pipeline that updates price elasticity estimations upon availability of new economic indicators, ensuring the model remains calibrated with current market conditions.
- Implemented a multi-level SARIMAX forecasting system for pharmaceutical distribution, improving prediction

accuracy from 88% to 92%. Implemented hierarchical predictions across various business dimensions (SKU, store, region) to optimize budget allocation.

## **IQVIA**

2020-2021

### *Consulting Intern*

- Provided strategic support for pharmaceutical product launches, analyzing both quantitative and qualitative survey data from the healthcare sector.
- Designed and conducted structured interviews with healthcare professionals, managing end-to-end survey execution from questionnaire design to data collection.
- Synthesized complex market research findings into executive-ready PowerPoint presentations, translating data insights into clear recommendations for product launch strategies

## **Teaching Experience**

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### **Coderhouse**

2022-2023

#### *Tutor*

- Tutor for the Data Science course, providing instruction and guidance to students in areas such as data manipulation, statistical analysis, and machine learning with Python.

## **Awards and honors**

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### **Academic Scholarship**

2017-2021

*Universidad Panamericana, Ciudad de México*

- Awarded half-tuition merit scholarship for the bachelor's degree in economics, based on outstanding performance in the university's competitive admission process.
- Maintained scholarship throughout the entire program by sustaining a minimum 8.5/10 GPA requirement

### **Basketball Scholarship**

2014-2017

*Universidad del Valle de Mexico, Lomas Verdes*

- Awarded full-tuition athletic scholarship for High School education, granted selectively to only 5 players annually
- Maintained scholarship throughout the entire program by sustaining a minimum /10 GPA requirement

## **Projects and Competitions**

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- Developed a Spatial Lag Model to analyze poverty-crime relationships across Mexico's 32 counties, incorporating spatial dependence through Moran's I statistics under Dr. Jose Miguel Torres' guidance.
- Participant in 'Reto Banxico', Mexico's prestigious central bank competition, where our team presented comparative monetary policy analysis of emerging markets to Banco de México officials, benchmarking Mexico's monetary framework against other developing economies
- Logistic Regression model for Econometrics II to predict changes in European Soccer forward's market value where I had to obtain the market value data and statistics from transfermrkt.com.
- Published "Analyzing NBA Timeouts" article, implementing multilevel logistic models to analyze timeout effectiveness using play-by-play data; selected by Medium's editors for broader distribution through Boost platform.
- Secured 12th place (Silver Medal, top 1%) out of 1,200 teams in Kaggle's NCAA March Madness competition, implementing XGBoost and Generalized Linear Mixed Effect models for tournament prediction.
- Participated in NFL's Big Data Bowl 2024, developing a methodology to evaluate tacklers using tracking data, creating two new metrics: Time to Tackle Opportunity Above Replacement and Tackles Above Replacement.
- Created [Player Profile](#) a comprehensive NBA analytics platform built with Dash, featuring interactive dashboards for player evaluation, incorporating advanced metrics with an Added Value metric relative to contract, play-type analysis, year-over-year performance comparisons, expected points from shot selection and diagrams to evaluate player's assists.

## Leadership

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### Treasurer

2020-2021

*Economics Student Society*

- Served as Treasurer of the Economics Student Society, managing budget and organizing academic and professional development events

### Basketball Team Captain

2016-2017

*Universidad del Valle de Mexico*

- Led team to National High School Championship title as Team Captain, demonstrating leadership and team management skills.

## Technical Skills

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**Languages:** Python, R

**Modeling Experience:** Time Series, Boosting Trees, Regression (Linear, Logistic), Clustering, Dimensionality Reduction, Neural Networks, NLP, Conditional Density Estimation

**Libraries:** Sklearn, Pandas, TensorFlow, PyTorch, XGBoost, SpaCy, Keras, sktime

**Data Visualization:** Matplotlib, Seaborn, Plotly

**Dashboards:** Dash, Streamlit, PowerBI, Tableau

**Cloud/Databases:** MongoDB, MS SQL, PostgreSQL, MySQL

**Model Serving:** FastAPI

**Machine Learning Platforms:** Azure Machine Learning Studio, AWS SageMaker, GCP Vertex

**Other relevant skills:** Docker, Prefect, Git, GitHub

**OS:** Windows, Linux