Jorge Espinoza Abud

Data Scientist

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About

My professional background has led me to take on multiple roles across various industries:

- I started my career as a production engineer in the marine industry, designing propellers for ships.
- I have worked as a data engineer in the real estate sector, building ETL pipelines and scrapers.
- I've been a software developer at a consulting firm.
- I also worked independently as a Python developer and data scientist on projects in the marketing, cloud computing, and ride-hailing industries.
- I have grown as a data scientist in the fintech industry, leading projects that supported decision-making and had
 an impact on risk management, customer behavior, and product growth, while also ensuring that processes
 remained optimized and standardized.

Currently as a senior data scientist at Uplabs, I am working on solving major challenges and revolutionizing the transportation industry through the creation of startups and products focused on data, data science, and artificial intelligence.

Experience

Senior Data Scientist at <u>Up.Labs</u> (May 2025 - Present)

Building data driven startups.

Lead Data Scientist at Bankaya (Jun 2023 - Feb 2025)

- Led a team of data scientists, providing technical guidance and driving risk and fraud detection initiatives.
- Designed, trained, and deployed machine learning models for risk and fraud across all company products, improving bad rates while maintaining approval rates.
- Increased fraud detection related to unwillingness to pay across the portfolio, enhancing risk assessment and mitigation strategies.
- Developed an internal Python library to streamline the data science workflow, reducing development time and ensuring standardization.
- Architected the feature store and built scalable pipelines for training data generation and real-time feature serving in production.
- Established standardized processes and templates for model training, evaluation, monitoring, and feature engineering, significantly reducing time-to-first baseline model and time-to-deployment.
- Defined cross-functional collaboration strategies with business teams, implemented best practices for data science operations, and maintained comprehensive documentation.
- Assessed data providers, conducted proof-of-concept experiments, and recommended high-value data integrations to enhance model performance and business impact.

 Designed and evaluated A/B tests, performing power analysis and statistical tests to determine sample sizes, experiment duration, and data-driven decisions for credit offers and product optimizations.

Lead Data Scientist at Konfío (Apr 2023 - Jun 2023)

- Mentored data scientists, providing technical guidance to refine project details while fostering independence and skill development.
- Led data science projects for collections, collaborating with stakeholders to prioritize initiatives, design machine learning solutions, and communicate updates and results effectively.

Senior Data Scientist at Konfío (May 2021 - Apr 2023)

- **Developed early warning detection systems** to help the collections team take proactive action at both **industry and client levels**.
- Built an **income estimation model** to assign credit lines to clients with **incomplete financial data**, improving credit decisioning.
- Designed a **customer lifetime value (CLV) model** to forecast revenue from card clients, supporting **long-term profitability strategies**.
- Developed a customer churn prediction model, enabling targeted retention strategies for high-risk clients.
- Created a **propensity model** to estimate customer likelihood of accepting **credit line offers**, optimizing sales team prioritization.
- Enhanced internal data science tools to improve efficiency in model monitoring and debugging, reducing troubleshooting time.

Data Scientist at Konfío (Nov 2019 - May 2021)

- Collaborated across three squads—Growth, Risk, and Collections—delivering data-driven solutions tailored to each domain.
- Developed a **time series model** to analyze **credit search behavior at the industry level**, identifying trends and market shifts.
- Built a **risk estimation model** for **recurring working capital clients**, improving credit decisioning and risk management.
- Designed a **collection optimization model** to predict the **best date to collect payments from clients**, enhancing recovery rates and operational efficiency.

Data Scientist - Python Developer at Self-employed (Feb 2018 - Nov 2019)

- @San pancho (now jellyfish): Conducted descriptive data analysis to identify customer segments and behavioral patterns. Developed a forecasting model to predict trends in customer behavior, optimizing targeting strategies.
- **@Teranalytics:** Designed a **business model for a new product** using **Monte Carlo simulations**. Built a **web-based platform** to visualize results, enabling clients to make **data-driven business decisions** based on future projections.
- @BlackInnTech: Developed an ETL pipeline and leveraged NLP models to process unstructured text data, extracting key insights for background checks and driver hiring for a major transportation services app.
- @Sanabria: Assisted with web development and IT support tasks.

Senior Developer at Kalypso (Apr 2017 - Feb 2018)

- Developed software solutions for the Product Life-Cycle Management (PLM) consulting team, enhancing process efficiency and data management.
- Tech stack: Java, Oracle platform.

Lead Data Engineer at Intelimetrica (Jul 2016 - Apr 2017)

- Led the development and maintenance of an ETL system for real estate data, ensuring a reliable data pipeline for company services and analytics.
- Developed NLP models to extract key insights from real estate data, enhancing new features for predictive
 models in the company.

Data Engineer at Intelimetrica (Mar 2016 - Jul 2016)

• Developed and maintained web scrapers, ensuring efficient data extraction for real estate analysis.

Production Engineer at Rice Propulsion (2013 - 2014)

- Contributed to the design phase of the marine propeller production process, optimizing efficiency and performance.
- Worked on the mechanical design and performed stress-strain analysis for a new product, ensuring structural integrity and reliability.

Education

Cypher Fundamentals

Certificate ID: 990c4cf7-f1de-4a88-a9d4-163bb25ee4ad

Experimental Design Basics

Certificate ID: 92238e4306f0fdf12620664bff4f7f67

A Crash Course in Causality: Inferring Causal Effects from Observational Data

Certificate ID: 48a72e1b6d07e85be20c8f93709c23b1

Perform data science with Azure Databricks

Certificate ID: <u>2c3d06a1771e6ab15a81159fafbc94d5</u>

Microsoft Azure Databricks for Data Engineering

Certificate ID: bb67deb56f7b56dddb9ed18a6ef23aaa

BSc Mechatronics Engineering

Instituto Tecnológico y de Estudios Superiores de Monterrey, Campus Guadalajara.

Projects

QR generator

I was curious about pyscript and I created a github page with a <u>QR code generator</u> using python and static website files.

Math animations

Project to visualize and animate math objects and algorithms, using python and matplotlib.

CPMX8 A.I. and Robotics Hackathon

The team and I developed a computer vision model and a simple web application to activate a web-cam, recognize faces and classify them by sentiment. We played with keras, IBM watson and flask.

Sentiment Analysis Classifier

A just for fun and learning purposes project, I used Twitter API to extract text and then build a model to classify it by sentiment.

Skills

- Team Leadership
- Machine Learning
- Data Science
- Data Engineering
- Analytics
- AB Tests
- MLOps

- Credit Risk Management
- Product Growth
- Extract, Transform, Load Pipelines
- Proof of concept and prototyping
- Data visualization and Dashboards

- Sklearn
- Pandas
- Numpy
- Pyspark
- MLFlow
- Neo4j
- statsmodels
- statsforecast
- Databricks

Languages

Spanish, English, Python