

IGNACIO MORALES

DATA SCIENTIST

Portfolio: <https://ignacio-morales.com/>

EDUCATION

Universidad Católica Argentina (UCA)

B.Sc. in Data Science

Buenos Aires, Argentina

Instituto Libre de Segunda Enseñanza (UBA)

High School Diploma

Buenos Aires, Argentina

PROJECTS

Loan Default Prediction with Fairness Audit | Personal project | 2026

- Credit risk model over 1.3M loans whose decision rule maximizes expected profit, not accuracy: an Optuna-tuned, isotonicly calibrated LightGBM that beats logistic regression and Random Forest baselines.
- Validated out of time on a year the model never saw: AUC 0.73 (validation) → 0.72 out of time, near-exact calibration, and a profit threshold at 0.1592.
- Disparate impact audit with Fairlearn (demographic parity and equalized odds) and profit-aware mitigation via group-specific thresholds that puts a price on equity (\$2.4M to \$5.7M) and raises the parity ratio above 0.92 across all groups.
- Stack: Python, scikit-learn, LightGBM, Optuna, SHAP, Fairlearn (reproducible environment with uv).
- Repo: github.com/morales-ignacio/loan-default-fairness

Buenos Aires Real Estate Trends | Personal project | 2026

- End-to-end pipeline (httpx + BeautifulSoup) that collects, deduplicates, and cleans every apartment-for-sale listing in the city into a single dataset, stored in PostgreSQL.
- Normalized 76 raw neighborhood labels to 41 official ones and computed the median price per m² in each (median, not mean, given price skew), showing that Puerto Madero is a 3.6x outlier relative to the cheapest neighborhood.
- Cleaned, documented, and published the dataset for reuse. Stack: Python, httpx, BeautifulSoup, PostgreSQL/SQLAlchemy, pandas.
- Repo: github.com/morales-ignacio/buenos-aires-real-estate

CERTIFICATIONS

- PCAD™ Certified Associate Data Analyst with Python (Python Institute)
- PCAP™ Certified Associate Python Programmer (Python Institute)
- Advanced Certificate in English, C1 (University of Cambridge)
- IBM Data Science Professional Certificate (IBM)

TECHNICAL SKILLS

Languages: Python, SQL (PostgreSQL, MySQL, SQLAlchemy)

Data and ML: pandas, NumPy, scikit-learn, LightGBM, Optuna, SHAP, Fairlearn, statsmodels, scipy

Visualization: matplotlib, seaborn, Plotly

Web and scraping: Playwright, BeautifulSoup, httpx, requests

Infrastructure: Git, GitHub Actions, Railway

Tools: Jupyter, uv, Excel, VS Code, Anaconda

Spoken languages: Spanish, English