

Sebastian Torres Ortiz

Machine Learning Engineer · AI Agent Systems · Full-Stack

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Bogotá, Colombia · Open to ML / AI roles

PROFESSIONAL SUMMARY

Machine Learning Engineer with 5+ years shipping production systems across computer vision, real estate ML, geospatial data, AI agents, and backend platforms. Currently focused on measurable outcomes: model accuracy, audit coverage, valuation error rates, and automation at scale. Experienced as a technical lead and hands-on builder in retail intelligence and PropTech.

5+

YEARS IN SOFTWARE & ML

8.2k+

LISTINGS AUDITED (ML)

40k+

RETAIL STORES MAPPED

81%

AVM TEST R² SCORE

PROFESSIONAL EXPERIENCE — SELECTED PROJECTS

Real Estate AVM — Apartment Valuation Model

Bogotá & Medellín · PropTech

Reals Lab · ML Engineer

Built an XGBoost automated valuation model predicting price-per-m² from listing attributes, cadastral references, and locality signals — with explicit data-quality audits before training.

- **81% test R²** and **15% MAPE** on 747 hold-out apartment listings (3,731 total corpus).
- Automated data audit: **420 garage outliers capped** and **216 stratum values normalized** pre-training.
- Top numeric drivers: stratum, antiquity, cadastral per m² — deployed via **realslab.xyz**.

Listing Audit — Marketplace Anomaly Detection

Finca Raíz · Metro Cuadrado

Reals Lab · ML Engineer

Segment-specific XGBoost classifiers flag anomalous property listings scraped from Colombia's largest real-estate platforms before they reach downstream valuation and analytics systems.

- **8,268 listings** audited across **6 city × property-type models** (Bogotá & Medellín).
- **93.4% average test ROC-AUC** and **76.7% average F1** on hold-out evaluation.
- Medellín apartments reached **97.8% ROC-AUC**; Bogotá houses **86.8% recall** at balanced threshold.

Quant ML — Market Anomaly Detection

Crypto · S&P 500 · Gold

Confidential · Quant Analytics

Production quant machine learning pipelines that detect structural anomalies across multi-asset markets. Live performance metrics remain confidential — scope and methodology only on portfolio.

- **10+ symbols** analyzed across crypto, S&P 500, and gold instruments.
- **10+ years** of historical OHLCV and regime features for model training.
- Production alert precision, latency, and live scores: **classified / withheld**.

Retail Shelf Intelligence — Computer Vision

Colombia · Retail AI

Harmony · Machine Learning Head

Led ML for product recognition on retail shelves — converting shelf images into detection, coverage, and brand execution analytics deployed across Colombian retail.

- **300+ brands** detected across Colombian retail shelf captures.
- **97% accuracy setting** for product-level detection workflows in production.
- **~58% image coverage** — share of shelf images with successful product detection, not market footprint.

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Experience & Technical Profile — continued

PROFESSIONAL EXPERIENCE — CONTINUED

Retail Census Simulation — Geospatial Data

Bogotá · Geospatial

Harmony · ML / Data Systems

Built data systems that simulate city-wide retail census: store density, microzones, and accessibility isochrones for coverage analysis and field operations.

- **40,000+ stores** collected, normalized, and mapped across Bogotá.
- **1,000+ microzones** and **1,000+ isochrones** for realistic city simulation.
- Enabled expansion strategy and retail intelligence UX for Harmony clients.

Risks Vision — Agentic Financial Research

AI Agents · FinTech

Risks Vision · Builder / Architect

Multi-agent system combining user context, market data, and risk checks to produce strategy analysis and auditable research workflows.

- **6+ specialized agents**: router, profile, market intel, strategy, risk, backtest, analyst.
- **24/7 monitoring** loops with 15-minute research cycle design for fast-moving markets.
- Production stack: backend services, cloud deployment, and terminal-grade frontend interfaces.

Unreal Destiny — Blockchain RPG Economy

Web3 · Gaming

BBStudios · Smart Contract Developer

Smart contract development for a fantasy RPG with transparent on-chain game economy and DeFi-style mechanics.

- **100,000+ transactions** generated across game economy and reward flows.
- Deployed integrations on **Meter, Polygon, and Arbitrum**.
- Validated economy rules on-chain for transparent player ownership and settlement.

TECHNICAL SKILLS

Quant ML

XGBoost, computer vision, feature pipelines, model serving, real estate AVM, listing audit ML, quant anomaly detection, evaluation metrics (R^2 , MAPE, ROC-AUC, F1).

AI & Backend

AI agents, Gemini workflows, Python, TypeScript, APIs, async pipelines, databases, ONNX / joblib deployment.

Cloud & Product

AWS, Google Cloud, Linux, Astro, React, Docker, geospatial data systems, smart contracts (Solidity).