

# Sebastian Marrero

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## PROFESSIONAL EXPERIENCE

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### NOMURA SECURITIES

Instinet Technology Solutions Analyst

New York, NY

Jul 2023 - Nov 2023

- Optimized revenue capture by driving software licensing onboarding for 50+ broker connections with market makers, resulting in \$260,000 gross yearly revenue and marketing opportunities via customer expansion
- Coordinated sprint-based system updates by aligning product, QA, and engineering teams to deliver trading software enhancements, including new asset class integrations (e.g., currency and commodity futures), while tracking project roadmaps under agile frameworks
- Built data dashboards in Excel to analyze back-end system usage data across a global client base that highlight usage trends and patterns, resulting in system performance improvements and enhanced client workflows

### CASTLE PLACEMENT

Analyst

Virtual

Aug 2022 - Dec 2022

- Compiled investor list on Canadian agritech companies targeting \$812M in capital raises
- Conducted market research via pitchbook to produce playbooks on PE, VC, growth equity, and pre-IPO clients

## EDUCATION & TRAINING

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### VANDERBILT UNIVERSITY

Bachelor of Arts in Economics, Minors in Data Science and Business

Nashville, TN

Aug 2020 - May 2023

- Awards & Honors: Dean's List (Fall 2021, 2022, Spring 2023), Association of Latin American Students Special Events Co-Chair, Inter-Fraternity Council member

### Columbia University - LEAP (Learning the Earth with AI and Physics)

Winter 2026 Momentum Bootcamp Participant

New York, NY

Jan 2026

- Analyzed large-scale climate datasets (e.g., ocean surface temperatures, top-of-atmosphere radiation from NASA's CERES project) to assess the effects of anthropogenic greenhouse gases using Python and Xarray
- Applied RNNs and CNNs to generate geospatial imagery; implemented LSTM models to predict global temperature maps based on CO<sub>2</sub> and CH<sub>4</sub> time series
- Performed Xarray operations (interpolation, Groupby, Resample, Rolling, Coarsen) and interactive climate visualizations via Holoviews on the LEAP-Pangeo cloud JupyterHub

### Vanderbilt Business Review

Staff writer

Nashville, TN

Feb 2022 - May 2023

- Authored research features on international economic policy, labor markets, and global development, translating complex data and academic literature into accessible insights
- Published analyses on skilled immigration ("Expanding H-1B: The Necessity of Skilled Foreign Labor") and industrial strategy ("China's Forced Technology Transfer Policy"), drawing on empirical evidence and economic theory

## FEATURED DATA PROJECTS

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### Investor ROI & Start-up Valuation SQL Dashboard

2025

- Employed MySQL and Python to analyze 1,200+ unicorn startups, identifying funding trends, ROI ratios, and top investor performance through ROI and other KPI metric design

### Credit Card Fraud Detection Classification Modeling Analysis

2025

- Built supervised classification models (Logistic Regression, XGBoost, LightGBM) to detect rare fraudulent credit applications, addressing class imbalance with weighted-training and data oversampling techniques
- Achieved 79% recall with a class-weighted LightGBM model, achieving a precision-recall AUC of 0.162 - outperforming all other models in analysis

## SKILLS AND CERTIFICATIONS

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- **Programming & Modeling:** Python (pandas, Matplotlib, Seaborn, scikit-learn, Jupyter), R, Trading APIs, VSCode
- **Data Analytics & BI:** SQL (PostgreSQL, MySQL, PgAdmin), Tableau, PowerBI, Databricks
- **Other tools:** Jira, Salesforce, GitHub, Capital IQ, Pitchbook, Adobe, Microsoft Suite (PowerPoint, Word, Excel, Outlook), Docker, Agile/Scrum, Claude Code, fluent in spanish
- **Certifications:** Series 7, 57, 63