Sebastian Marrero

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FEATURED PROJECTS

Credit Card Fraud Detection Classification Modeling Analysis
- 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
- Feature engineered credit velocity, device-level behavior, and credit risk metrics to ultimately benchmark model performance against data set using precision-recall curves tailored for high skew

Saas Subscription Service Customer Churn Modeling Analysis
- Used Python to analyze churn behavior in 42,000+ SaaS customers and visualize customer-risk segments across a set of numerical and categorical features with Seaborn and Matplotlib packages
- Built predictive churn models using scikit-learn, achieving 79% AUC, 77% churn recall, and 71% overall accuracy across logistic regression and random forest classifiers

Investor ROI & Start-up Valuation SQL Dashboard
- Employed MySQL and Python to conduct analysis of 1,200+ unicorn startups, identifying funding trends, ROI ratios, and top investor performance through ROI and other KPI metric design
- Built interactive Tableau dashboards to visualize ROI by investor, industry growth, and country-level insights

PROFESSIONAL EXPERIENCE

Nomura Securities, New York, NY

Instinet Technology Solutions Analyst   July 2023 – Current
- Conducting software system performance tests in collaboration with product management and platform development teams to enhance platform connectivity and user trading experience
- Driving software licensing onboarding for 40 electronic market connections with various market makers, resulting in $244,200 yearly revenue for the firm and increased marketing opportunities via customer expansion
- Spearheading website development of trading network monitoring tool by conducting A/B testing to determine most effective UX design, resulting in quicker and more strategic diagnosis of network problems and up to 60% faster response times to clients undergoing network interruptions

Bernstein, Washington, DC

Private Wealth Management Associate   June 2022 – August 2022
- Executed client transactions and assisted in advisory across 1500 private clients with an estimated AUM of $1.6B

EDUCATION

Vanderbilt University, Nashville, TN

Bachelor of Arts in Economics   August 2020 – May 2023
- Awards & Honors: Dean's List, fall 2021, Fall 2022, Spring 2023
- Coursework: Economics of Risk, Macro and Microeconomics, Business Development, Negotiation, Spanish for Business/Econ, Applied Programming w/ Python, Entrepreneurship, Financial Management, Great German Works

Houston Community College, Katy, TX

Associate of Science in Engineering Science   August 2019 – May 2020
- Cumulative GPA: 3.8
- Awards & Honors: Dean's list, Fall 2019 and Spring 2020, SHPE Houston chapter scholarship, Spring 2020
- coursework: Calculus I & II, Physics 1, Programming Fundamentals 1 using C++, Engineering Management

LEADERSHIP EXPERIENCE

Vanderbilt University Interfraternity Council

Vice President – Kappa Sigma   December 2021 – December 2022
- Elected by interfraternity council to lead bi-weekly meetings with fraternity leaders to develop campus-wide initiatives

AWARDS
- Western Colorado Community Foundation Faye Shofner Talley Scholarship (2019-2023), Marge Miller Scholarship (2019)
- Tulsa Community Foundation NGL Energy Partners Dependent Scholarship (2021, 2022)
- Saccomanno Higher Education Foundation Scholarship (2019-2020)

SKILLS & CERTIFICATIONS
- Agile, PostgreSQL, PgAdmin, MySQL, DBeaver, SQLite, VSCode, Microsoft 365, Excel (pivot tables), Github, SIE, Series 7, 63, 57, Jira, Tableau, R Studio, Adobe Acrobat, Jupyter Notebooks, Pitchbook, Capital IQ, Salesforce CRM, fluent in Spanish