

# Miguel Bueno

## Summary

Data Scientist with 5 years of experience using statistical inference and computing to solve challenging business problems across Tech and Finance. Posses degrees in both economics and mathematics with emphases in econometrics and statistics. Proficient in a number of languages including SQL & Python.

## Experience



### Google

December 2021 - Present

#### Data Scientist - Product

July 2023 - Present

- Provide analytical support to Google Shopping's Merchant Organization
- Design and analyze live **experiments**, including **A/B tests**, to evaluate the impact of product launches and changes
- Inform future experimentation and **metric design** by performing exploratory analysis in Jupyter Notebooks.
- Design and analyze **surveys** to assess user opinions and attitudes towards product features.
- Develop statistical **models** to explain relationships and trends, and guide executive decision-making.
- Employ **quasi-experimental** methods to evaluate product impact and causal relationships in the absence of full randomization.
- Create and maintain executive-facing dashboards that track key metrics and performance trends
- Engineer data-pipelines and ETL workflows using **SQL** and **JSON**.
- Partner with cross-functional groups such as Engineering, Product, User Experience, and Development

#### Key Accomplishments

- Led the development of Google Shopping's time-to-event KPI framework for its **2025 initiatives**. Conducted comprehensive literature reviews to enhance the framework's foundation, and engineered and deployed **machine learning** survival models in production to successfully estimate these **Northstar metrics** in production, facilitating organization-wide tracking and experimentation.

#### Strategist, Trust and Safety

December 2021 - July 2023

- Provided analytical support to Google Ad's Systematic Abuse Investigations team
- Wrote **SQL** and **Python** scripts in Jupyter Notebooks to extract actionable abuse, harm fighting, and mitigation intelligence
- Analyzed data using statistical methods to identify trends and draw inferences
- Issued briefs and reports on emerging trends, escalations, and preventions for executive stakeholders
- Developed ETL workflows and machine learning models with **TensorFlow** to identify and action on malicious Ads accounts
- Created dashboards and data visualizations for abuse monitoring and reporting purposes
- Engineer ETL workflows using **Python**, **SQL**, and **JSON** to automate reporting workflows
- Collaborated with cross-functional groups such as Engineering, Payments, Sales, and Legal to generate insights and enhance operational workflows

#### Key Accomplishments

- Conducted an analysis that identified that within a month, weekly unpaid balances attributable to Ads accounts with only debit card declines increased from **\$2.4M** to **\$15.8M**, **558%** respectively. Referenced by more than **40** individuals spanning Trust and Safety, Ads, and Payments, these discoveries prompted an escalated incident that concluded in several system, process, and business development changes. Furthermore, I developed and maintained the corresponding escalated incident monitoring and reporting dashboard that was continuously referenced by more than **35** individuals, including senior leadership.
- Engineered an ETL workflow to automatically read, review, action-on, and respond to Boleto refund fraud litigation submitted by Google Legal Brazil, closing **3K** litigation requests, suspending more than **1.5K** fraudulent Ads accounts engaging in **\$4.5M** worth of fraudulent payments, saving **over 500** full-time employee hours, and decreasing average time-to-closure by **more than 75%** annually. Furthermore, using data gathered by this workflow, I constructed the first high-precision, systematic suspension of Boleto refund fraudsters using relational clustering algorithms to proactively suspend **7.5K** Ads accounts with over **\$6M** in fraudulent payments.

## Contact

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## Competencies

Statistical Inference

Machine Learning

Experimentation & Causal Inference

## Technical Skills

**Languages:** SQL, Python, R, JSON

**Tools:** Jupyter Notebooks, GitHub, Tableau



## Bank of America Corporation

July 2020 - December 2021

### Officer, Quantitative Management Associate, MRM

June 2021 - December 2021

- Provided analytical support to Bank of America's Retail Capital & Loss Forecasting Validation team
- Wrote **Python** and **PySparkSQL** scripts to conduct independent model review, testing and ongoing monitoring of retail credit risk models
- Communicated issues identified through validations to relevant businesses, governance & control functions
- Escalated model use breaches and remediation plans to relevant governance committees
- Wrote comprehensive, structured validation reports for model assessments in **LaTeX**, ensuring they met regulatory requirements for independent validation
- Researched related modeling techniques and develop alternative models as required

### Officer, Quantitative Management Associate, ECR

July 2020 - June 2021

- Provided analytical support to Bank of America's Risk Rating Group & Country Risk Group
- Created Tableau dashboards and risk rating reports for monitoring and control purposes
- Wrote **SAS** script and **SQL** queries to validate the Risk Rating restatement logic
- Coordinate the Enterprise Impact Assessments and followed up with respective teams as required
- Developed and maintained Risk Rating process documents and training material
- Supported the preparation of Risk Rating executive leadership committee materials
- Prepared monthly country-level economic indicators and composite country risk scores, and recorded Country Exposure Limit actions



## California State University, Fresno

May 2018 - August 2019

### Research Assistant

- Provided data management and analytical support to Fresno State's Office of Institutional Effectiveness
- Conducted data mining, reporting, and analysis, in support of planning, policy formation, decision-making, and preparing questionnaires
- Wrote **R** scripts to provide actionable insights and measure performance of university programs
- Created Tableau dashboards and data visualizations for university distribution
- Conducted literature searches, identified information for pilot projects, and issued reports and keynotes on relevant findings

## Education

### University of California, Santa Cruz

Master's of Science (M.S.), Applied Economics and Finance (2020)

### California State University, Fresno

Bachelor's of Science (B.S.), Mathematics - Statistics (2019)

Bachelor's of Arts (B.A.), Economics (2019)