

Jaime Andrés Castañeda

Data Scientist

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Summary of Qualifications

- Researcher with 10+ years of experience applying behavioral economics, statistics and econometrics to study decision-making in supply chains
- Data science and machine learning training with Correlation One and DeepLearning.AI using Python and SQL
- Rigorous, organized and ready to give a hand to my teammates and learn from them

Skills

- **Programming languages:** Python, SQL, Java
- **Analytics:** data cleaning, data visualization, descriptive and inferential statistics, econometrics, machine learning
- **Tools:** Python (pandas, matplotlib, seaborn, numpy, statsmodels, scikit-learn, keras), Postgres, Stata, SPSS, Excel, Power BI, Git, Qualtrics, LimeSurvey

Relevant Experience

Data Science Fellow, *Correlation One*

Mar 2022 – Jul 2022 | Remote

- Collaborated with five teammates to analyze motorcycle accidents in Bogotá for prioritizing road safety operations, pulling data from a GIS web service into a local Postgres database
- Analyzed more than 200,000 rows of accident data, creating heatmap visualizations based on crosstabs that relate accident type, accident severity and vehicles involved using SQL, Python and Seaborn
- Developed an unsupervised machine learning model by engineering continuous and categorical features using the K-Prototype algorithm in Python, defining prioritization levels for road safety operations

Associate Professor, *Universidad del Rosario*

Sep 2021 – Jan 2022 | Bogotá, Colombia

- Co-led a funded research project that analyzed the role of expediting prices in inventory replenishment, implementing a behavioral experiment with 400+ participants in a Python-based experimentation platform
- Examined more than 25,000 rows of replenishment decisions using Excel, creating customized column chart visualizations of the decisions grouped by expediting prices and behavioral interventions, averaged over subjects
- Fit five supervised machine learning models by engineering continuous and categorical features using random-effects panel data models in Stata, providing insight into how expediting prices impact replenishment decisions

Assistant Professor, *Universidad del Rosario*

Apr 2016 – Sep 2021 | Bogotá, Colombia

- Advised the World Food Programme on the potential of return contracts to scale crop storage technology production, leading a funded project that implemented a behavioral experiment in Uganda with 40 students and six tinsmiths
- Analyzed about 2,000 rows of production decisions using Excel, creating customized scatter chart visualizations of the decisions grouped by contract type and contract prices, averaged over subjects
- Fit four supervised machine learning models by engineering continuous and categorical features using multiple linear regression models in Stata, providing insight into how return contracts influence production decisions

Additional Experience

- Currently migrating the statistical and econometric analyses from my latest academic project to Python code
- Collaborated in a simulation and optimization project that analyzed the performance of a covid-19 vaccination process, finding process configurations that can reduce patient waiting times by ~50%
- Co-led a simulation project that investigated the operation of a cross-docking facility, finding configurations that allow to dispatch the fleet in less than half an hour

Education

Ph.D., Economics, *Università della Svizzera italiana*

2013 | Lugano, Switzerland