Marlon Molina

Data Scientist

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in LinkedIn

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EXPERIENCE

Data Analyst, Data Scientist
Ministry of Foreign Trade
June 2019 – current / San José, Costa Rica

- Collect, explore, and prepares the data in SQL. This process receives data from four diverse sources and consolidates them into a database
- A telegram bot is responsible for sending any changes in the ETL process, runs twice a day
- Web Scrapping testing of internal data published online covers the 95% of the data
- Supervised learning models (regression and classification) to forecast the total sales of the country and determine which products, among 4060, perform better
- Automation of queries and API calls. For repetitive queries, programming ready-to-run Python scripts which save 80% of the time
- Research of arrays with trade and employment flows between countries. This dataset shows trade-employment patterns such as that the share of trade in Costa Rica's employment change is 20%
- Pipeline of Covid 19 cases daily data, using continuous delivery the data updates daily and send it as input for sales forecasting to relevant trading partners

Research Scientist
Universidad Nacional
April 2021 - current / Heredia, Costa Rica

- Government analysis over the years using time series techniques, for example: every dollar increases in the country's GDP, there is a $3.4 increase in tax revenue
- Optimization problems in strategic products and the impact on them of adding a tax between 13% and 15%
- Genetic algorithm to identify which products may be taxed higher than they should be, affecting the welfare of the population. The tax range is between 0% and 20%.

Research Assistant
Universidad Nacional
January 2017 – March 2019 / Heredia, Costa Rica

- Tax incidence analysis, where it is possible to identify who pays taxes, according to the population's income
- Reports and dashboards of government variables to detect trends such as a percentage of debt or increase in government spending

EDUCATION

M.E.D.
Development Economics
Universidad Nacional
April 2019 - April 2021
Heredia, Costa Rica

B.S.
Economics
Universidad Nacional
April 2017 - April 2019
Heredia, Costa Rica

SKILLS

Python (NumPy, Pandas, Scikit-learn, Keras, Selenium)
R (Dplyr, Ggplot2, Rmarkdown)
SQL (Postgres)
Git
Time Series Forecasting
AWS (SageMaker, lambda, S3)

PAPERS

Impacto del Impuesto sobre el Valor Agregado sobre la incidencia y la equidad
February 2022
DOI: 10.15359/euna.2022-5

Los efectos de la política fiscal en Costa Rica: Una aproximación con shocks fiscales
September 2022
DOI: 10.22533/at.ed.2162152219087

Incidencia del Impuesto al Valor Agregado: aplicación de un Modelo de Equilibrio General Computable en Costa Rica
April 2019
Thesis