Cayan Atreio Portela

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cayan-portela • Brazilian, single, 31 yo.

Profile

With over five years of experience in data science, statistics, quantitative finance and programming languages. Solid knowledge of R, SAS, python and SPSS. Successfully conducted machine learning pipelines and quantitative methods in several areas such as churn models, customer propensity, portfolio management and econometrics. Academic research experience in models applied to probability of default, stock price forecasting, quasi-experimental designs and others. Participation in multidisciplinary teams tackling problems and implementing solutions, resulting in significant profitability and broad organizational impact.

Education

Finance and Quantitative Methods
Phd candidate, *2019–Current*
Unversity of Brasília

Experimental Statistics
MSc, *2016–2018*
University of São Paulo, USP

A shiny app to perform generalized linear models.
Available at: https://cayan.shinyapps.io/glm-app

Statistics
BSc, *2011–2015*
University of Brasília

Genome Wide Association Study
Computational and heuristics strategies to deal with high-dimensional data.

Experience

Bank of Brazil - Investment Division **Brasília**

Data Scientist *2019–Current*

At Bankf of Brazil I was part of business intelligence team. There were only two statisticians/data scientists in the whole division, therefore, I was responsible for the use and development of many data science methods towards decision-making with business values. Some of the projects are listed below:

- Provided individualized retail porfolios indicators to investment advisors, such as return, volatility and semi-volatility
- Indetified opposite portfolios in the risk-return efficient frontier
- Associated portfolio performance with investor risk profile and investment rescue in order to identify customers more in need of intervention
- Implemented churn models for asset under managament, monitoring the probability of a customer send its assets to another investment broker
- Once churn models were instituionalized and developed from the new Analytics Division, I was responsible for monitoring and approving the whole pipeline for the new churn models
- Unsupervised models identifying customer profile
- Monte Carlo Simulation used for economic indicators to supply the robot-advisor with an objective key, providing optimistic and pessimistic forecast scenarios

University of Brasília **Brasília**

Volunteer Professor - Adminsitration and Management Departament *2019–Current*

As soon as I started my Phd at University of Brasília, I also started teaching as a volunteer professor under School of Economics, Business and Accounting, at UnB. Specially in the CTF (Data Science) subject, I was able to teach introductory concepcts on data science and programming languages, topics that students in the management departament usually have little contact with.

- Contemporary Topics in Finance - Data Science
- Quantitative Methods for Decision Making (2019/1)

IPEA - Institute of Applied Economic Research **Brasília**

Researcher *2017–Current*

This was my first job as a Data Scientist and I have been working with them for the last 6 years. There, I worked in projects related to quasi-experimental analysis, Public Policies evaluation, Forecasting Time Series, manipulation and visualization of economic and credit indicators, Machine Learning, Text Mining, and many others application. IPEA is the most important firm in Brazil that studies the Brazilian Economic System.

Machine Learning Laboratory in Finance and Organizations **Brasília**

Researcher *2017–Current*

LAMFO is aimed at developing, applying and studying organizational phenomena in several areas such as Marketing, Logistics, Public Administration, People Management and Finance. The tasks that I have developed there involved data cleaning, manipulation and visualization, machine learning models pipelines, data collected with *web-scrapping* and API's. One of the main projects was about estimating the probability of automation of brazilian occupations. This was an unprecendented study in the national scenario, as the study was boradcast in several medium in Brazil (some of them are listed below, in publications section). I also was part of a consultant to CNI, in which we had the opportunity to develop a platform for visualization. We go through the whole data scinece pipeline in our projects, regardless the goal beeing academic publication or market consultancy.

CNI - National Confederation of Industry **Brasília**

Consultant *2021*

The goal of this project was to analyze the skills that are being on demand by the market labor. In this way, along with another senior data scientist, we periodically collected work jobs vacancies on websites, tracking the time that they would remain available. With the job description, we got the embeddings using the BERT framework, ending up with 768 numbers for each word. We used a groupped lasso bayesian glm under a survival analysis approach, to tackle the problem.

CNI - National Confederation of Industry **Brasília**
Consultant *2018*
On this project I contributed to the developtment of a interactive platform in open-source language, providing georeferencing of baisc education institutions and industrial establishments on a national scale.

Publications

Feature selection and deep neural networks for stock price direction forecasting using technical analysis indicators
Machine Learning with Applications, 100060, (2021)

Cost of brazilian credit during the pandemic.
Saavedra, C. A. P. B. (2021)., Radar 67, Diset, IPEA.

Application of Machine Learning Ensemble Techniques in the Banking Industry
CFA Society Brazil, Honorable Mention (2020)

The robot from Ipanema goes working: estimating the probability of jobs automation in Brazil
Latin American Business Review, 20.3, (2019)

Automation probability of Brazilian occupations and the Industry 4.0.
https://lamfo.shinyapps.io/automacao
Media broadcasting: Folha de São Paulo, Época Negócios.

In the age of machines, whose job is it? Estimation of automation probability of occupations in Brazil.
Texto para Discussão, v. 2457, p. 1-32, 2019:

Credit for innovation in Brazil: impacts of studies and projects financing on R&D effort of its beneficiary firms.
Financiamento do Desenvolvimento no Brasil. 1ed.: , 2018, v. , p. 259-279, cap. 8.