# Cayan Atreio Portela

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#### **Profile**

With over five years of experience in data science, statistics, quantitative finance and programming languages. Solid knowledge of R, SAS, python, SPSS abd Excel. Successfully conducted machine learning pipelines and quantitative methods in several areas such as churn models, customer propensity, portfolio management and econometrics. Participation in multidisciplinar teams tackling problems and imeplemting 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

Responsible for the use of data mining towards decision making with business values.

- Provided individualized retail porfolios indicators to investment advisors, such as return, volatility and semi-volatility
- o 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

Voluntary Professor - Adminsitration and Management Departament

2019-Current

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

#### IPEA - Institute of Applied Economic Research

Brasília

2017-Current

Researcher

Econometric models for causal effect inference

- Quasi-Experimental models with observational data
- Supervised and unsupervised machine learning models
- Data collecting with web-scrapping
- Data visualization

#### Machine Learning Laboratory in Finance and Organizations

Brasília

Researcher

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-scarpping* and API's. Basicaly, regardless if the goal is academic publication or market consultancy, we go through the whole

data scinece pipeline in our projects.

2017-Current

CNI - National Confederation of Industry

Brasília

2018

Consultant

Development of an interactive platform in open-source language, referring to the georeferencing of basic education teaching 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.

# Round tables

BRICS
Labour Research Institute Network Meeting
2019

Painel: Skills development and Lifelong Learning for an Inclusive Future of Work

RAPS São Paulo

Rede de Ação Política pela Sustentabilidade. 2019

Painel: Future of work and sustaintability.

## **Lectured Seminars**

Escola Nacional de Administração Pública

Specialization in Data Analysis for Public Policy

2018

Assistent Professor - Data Science with R

University of Brasília Brasília

School of Economics, Business and Accounting. 2018

Palestra: How to deal with human resources with artificial intelligence?

University of Brasília Brasília

Extension Week 2017

Introduction to Statistical Computing with R.

University of São Paulo Piracicaba

Exact Sciences Department 2016

Interactive analysis using R-shiny.