Gabriel Filipe Rodrigues Vasconcelos

Personal data:
Birthdate: 1988-12-21
Nationality: Brazilian, Italian
Email: gabrielrvsc@gmail.com
home page: https://sites.google.com/view/gabrielvasconcelos/
GitHub: https://github.com/gabrielrvsc
phone: +55 (32) 98815-5898

Professional Experience

BOCOM BBM Bank
Position: Head of Quantitative Research
Activities: I lead the Quantitative Research team in the Bank. My main achievements/responsibilities include 1) the development and management of state of the art probability of default models with machine learning, binning techniques, and survival models, 2) LGD estimation by measuring collateral quality, 3) capital requirement, 4) development of several industry specific scorecards, 5) credit limit targets for smaller operations to create scalability, 6) macroeconomic forecasting, 7) energy trading models, 8) industry risk measurement using data from listed companies, and 9) management of the research/model infrastructure in the Bank, which uses tools such as RStudio Server, Python, Cloud computing, databases and mode. I am also responsible for planning and reporting to stakeholders future developments of models, how the models will be used and how they communicate with each other.
Period: August 2020 – current

Vox Radar
Position: Lead Data Scientist – Co-founder
Activities: I am one of the founders of the Vox Radar (https://www.voxradar.com.br/) start-up. The main product of the company is a SaS of social media monitoring where users can monitor topics such as politics, sports, economics, etc. I started developing the models and infrastructure of the fist versions of the SaS, some of which are still in use. The company started to get a lot of media attention due to its speed to build intelligence from social networks when new trend topics start showing. Although I don´t work in Vox Radar anymore, I still have shares and some participation in the long term decision making.
Period: July 2019 – December 2021

Department of Economics – University of California, Irvine
Position: Postdoctoral Research Associate
Activities: During this **period I w**orked with Machine Learning and its applications in Economics as a member of the Deep Data Lab. My research was based on large datasets of credit related variables both on personal credit and corporate credit.
Period: July 2019 – July 2020

Department of Economics – Pontifical Catholic University of Rio de Janeiro
Position: Postdoctoral Research Associate
Activities: During this period I worked in independent high-quality research that resulted in publications in journal such as Journal of Econometrics. I was also a lecturer of undergraduate and graduate courses.
Period: September 2018 – July 2019

DLAB PUC-Rio & Lojas Americanas (Large Retail Company)
Position: Data Scientist
Activities: During my time in Lojas Americanas I participated in the creation of a Data Science Lab in partnership with PUC-Rio, where I was doing my Phd. My activities and achievements in the lab were 1) to build the research infrastructure for the lab to start running. 2) I also developed models to predict demand and estimate elasticity of retail products.
Period: April 2016 – August 2018

Consulting Jobs:

Covid19 Analytics PUC-Rio
I was one of the members of the first group that started the covid19analytics.com.br platform. We had a huge impact in Brazil predicting the evolution of the pandemic and the contamination rate of the virus in city, state and country levels. The platform had a lot of media impact with hundreds of interviews and citations in every media company in Brazil.

Navi Capital
Three months job to assist the company in creating a Data Science/Business Intelligence department.

Parcitas Gestão de Investimentos/ Opportunity (Investment Companies)
Three months job to develop a toolkit to forecast the Brazilian inflation and industrial production using Machine Learning Methods.

SPX Gestão de Recursos (Investment Company)
Four months teaching job of Machine Learning methods with theory and application.

Education:

PhD
Period: August 2014 – July 2018
Institution: Pontifical Catholic University of Rio de Janeiro
Department: Electrical Engineering
Specialization: Decision Support Methods
Thesis: Forecasting in High-Dimension: Inflation and other Economic Variables
Advisor: Álvaro Veiga
Co-advisor: Marcelo Medeiros

MSc
Period: January 2012 – December 2013
Institution: Federal University of Juiz de Fora
Department: Economics
Specialization: Finance

Bachelor Degree
Period: January 2008 – December 2011
Institution: Federal University of Juiz de Fora
Department: Economics

Publications:

Residual Based Nodewise Regression in Factor Models with Ultra-High Dimensions: Analysis of Mean-Variance Portfolio Efficiency and Estimation of Out-of-Sample and Constrained Maximum Sharpe Ratios.
Journal of Econometrics (2022)

Predicting mortality from credit reports.
Financial Planning Review (2021)

Short-Term Covid-19 Forecast for Latecomers.
International Journal of Forecasting (2021)

Heterogeneity in the Effects of Food Vouchers on Nutrition Among Low-Income Adults: A Quantile Regression Analysis
American Journal of Health Promotion (2021)

Forecasting Inflation in a data-rich environment: the benefits of machine learning methods
Journal of Business & Economic Statistics (2021)

Measuring the aggregate effects of the Brazilian Development Bank on investment
The North American Journal of Economics and Finance (2019).

Arco: An R package to estimate Artificial Counterfactuals
The R Journal (2018) with package available on CRAN

Real-time inflation fore-casting with high-dimensional models: The case of Brazil
International Journal of Forecasting (2017)

Forecasting Brazilian Inflation with High-Dimensional Models
Brazilian Review of Econometrics (2016)

Mitigating wind exposure with zero-cost collar insurance
Renewable Energy (2016)

Forecasting Macroeconomic Variables in Data-rich Enviroments
Economics Letters (2015)

Parametric Portfolio Selection: Evaluating and Comparing to Markowitz Portfolios
Brazilian Review of Finance (2014)

Book Chapters:

Penalized Time Series Regression
Macroeconomic Forecasting in the Era of Big Data (2020)

Working Papers:

BooST: Boosting Smooth Trees for Partial Effect Estimation in Nonlinear Regressions. *With Yuri Fonseca, Marcelo Medeiros and Álvaro Veiga.*

Managers versus Machines: Do Algorithms Replicate Human Intuition in Credit Ratings? *With Matthew Harding.*