Gustavo Varela-Alvarenga

Statistician

www.ogustavo.com || apps.ogustavo.com

University Park, MD || contact@ogustavo.com

About me

Statistician with **5 years** of experience with **econometric research** and over **7 years** of experience with quantitative and qualitative **data analysis**. Won an **award** for a paper in which I evaluated the **impact** of a public policy in Brazil. Currently, **PhD candidate in Statistics** and developing a new method for **time series forecasting** (theory, R package and Shiny app). Looking for an internship or part-time job in data science/statistics/research.

Stat Methods

Time-series analysis
Generalized Linear and Mixed models
ANOVA/MANOVA/ANCOVA
Instrumental variable models
Selection models
Matching algorithms
Hypothesis Testing
Monte Carlo simulations
Bootstrap methods
Descriptive statistics
Survey methodology

Analytical Skills

Impact Evaluation
Research
Econometric analysis
Data analysis and management
Critical and model thinking
Problem solving
Qualitative and quantitative analysis
Web scrapping
Data visualization

Experience

08/13 - 07/14
Think Tank
Brasilia, Brazil

Lead Statistician   Brazilian Agency for Industrial Development (ABDI)
- Worked with a multidisciplinary team in the development of studies and research papers/whitepapers to assess the impact of public policies towards Brazilian industrial development by gathering data from different sources and surveys, and analyzing it;
- Presented the results to the Brazilian Minister of Industry.

08/12 - 07/14
University
Brasilia, Brazil

Lecturer - Applied Statistics   Universidade de Brasilia
- Taught applied statistics to undergrad students from areas outside STEM (e.g. social sciences, psychology & others);
- Found ways to convey complex concepts to a non-technical audience.

01/09 - 08/13
Think Tank
Brasilia, Brazil

Researcher   Institute for Applied Economic Research (IPEA)
- Evaluated the impact of public policies towards Industrial Innovation using a wide range of statistical methods and recommended actions for policy improvement based on results of simulations (see section Publications);
- Handled, processed and analyzed large datasets from multiple sources.

Education

08/14 - 12/19
(expected)
Maryland, USA

Ph.D. Candidate in Statistics   University of Maryland at College Park
Dissertation: A new method for time series forecasting.
Adviser: Dr. Benjamin Kedem

08/09 - 12/11
Brasilia, Brazil

Master in Economics of the Public Sector Universidade de Brasilia, Brazil
Title of thesis: *Impacts of the Brazilian science and technology sector funds on industrial firms' R&D inputs and outputs: new perspectives using a dose-response function*.
Adviser: Dr. Donald Pianto

02/04 - 12/08
Brasilia, Brazil

Bachelor of Science in Statistics   Universidade de Brasilia, Brazil
Title of monograph: *The Empirical Characteristic Function Applied to Operational Risk Modeling*.
Adviser: Dr. Raul Matsushita

Awards

12/2012
Pernambuco, Brazil

CNI National Economy Award   2nd Place (Prêmio CNI de Economia)
Award granted to the paper: "Impacts of the Brazilian science and technology sector funds on industrial firms' R&D inputs and outputs: new perspectives using a dose-response function".
Click here for the full paper in English and here for more info about the award.

Software

R - 9 years

Shiny - 2 years

SAS & PROC SQL - 7 years

LaTeX - 6 years

STATA - 3 years

SPSS - 2 years

MATLAB - 2 years

Python - < 1 year

JavaScript - < 1 year

Datasets

Experience with large datasets, including data from household surveys. Had to, efficiently, combine several datasets - with around **50 million lines each** and 15 GB each - by an unique identification number. Used **SQL** procedures in SAS (PROC SQL) for data extraction and manipulation due to the size and complexity of the datasets.

Data Visualization

R packages:
ggplot2
plotly
highcharter
dygraph
googlevis
ggiraph
shiny

Languages

Portuguese - Native

English - Fluent

Selected Publications

Demand for air ticket in economy: a co-integration analysis.
Journal of Transport Literature. Vol. 5, number 3, pp. 64 − 88. April, 2011.
Click here for the full paper in Portuguese with abstract in English.

Counter-cyclical policies in the automobile industry: a co-integration analysis of the impacts of IPI reduction on vehicle sales
Texto para Discussão No. 1512. Instituto de Pesquisa Econômica Aplicada (IPEA), 2010.
Click here for the full paper in Portuguese with abstract in English.

For a full list of publications, see my Google Scholar profile.

Short Courses

2018	**Learn Python - Online Course**	Codecademy
2018	**Introduction To JavaScript - Online Course**	Codecademy
2012	**Game Theory - Online Course**	Stanford University
2012	**Model Thinking - Online Course**	University of Michigan
2012	**Topics in Real Analysis - Summer Course**	Universidade de Brasilia

Other Info

Teaching: I am a teaching assistant for the following course at University of Maryland, College Park: STAT100 - Elementary Statistics and Probability

For a complete resume, see my website: www.ogustavo.com

For a list of my publicly available Shiny apps, go to: apps.ogustavo.com

StackExchange
R related answers (including Data Visualization-related answers): https://goo.gl/aoRJ6W
Statistical-related answers: https://goo.gl/HcEdri
Probability-related answers: https://goo.gl/d71GN3

LinkedIn Profile: link