Pedro Henrique Filipini dos Santos

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EDUCATION

University of São Paulo, São Paulo, São Paulo, Brazil

- Master of Science in Statistics — Feb 2016 – Present
  - Dissertation: Tree-Based Bayesian Treatment Effect Analysis
  - Advisor: Prof. Hedibert Freitas Lopes, PhD
  - Focus: Bayesian regression trees, Causality, Propensity score.

Federal University of São Paulo, Osasco, São Paulo, Brazil

- Bachelor of Science in Economics — Mar 2011 – Dec 2015
  - Monograph: A Study of the Relationship Between Assets Portfolios of the Brazilian Industrial Sector and Macroeconomic Variables
  - Advisor: Prof. Mauri Aparecido de Oliveira, PhD
  - Focus: Industry sector, Macroeconomic variables, Financial econometrics.

WORK EXPERIENCE

Federation of Industries of the State of São Paulo - FIESP , São Paulo, São Paulo, Brazil

- Intern - Research and Economic Studies Department (DEPECON) — Sep 2014 – Aug 2015
  - Manager: Guilherme Renato Caldo Moreira
  - Focus: Macroeconomic Analysis, Economic Conjuncture, Manufacturing Industry.

RESEARCH EXPERIENCE

Integrated System of Quantitative Analysis, Computational Finance, Applied Policy Sciences and Metropolitan Studies - MQuant, Federal University of São Paulo

- Undergraduate Research Student
  - Project: Forecasting Stock Prices with Panel Data Regression Models — Aug 2013 – Jul 2014
  - Project: Forecast of Stock Returns with ARIMA-GARCH models — Aug 2012 – Jul 2013
  - Advisors: Prof. Rosângela Toledo Kulcsar, PhD and Prof. Mauri Aparecido de Oliveira, PhD

WORKING PAPER

Tree-Based Bayesian Treatment Effect Analysis - Joint work with Hedibert Freitas Lopes

- The inclusion of the propensity score as a covariate in Bayesian regression trees for causal inference can reduce the bias in treatment effect estimations, which occurs due to the regularization-induced confounding phenomenon. This study advocates for the use of the propensity score by evaluating it under a full-Bayesian variable selection setting, and the use of Individual Conditional Expectation Plots, which is a graphical tool that can improve treatment effect analysis on tree-based Bayesian models and other ”black box” models. The former, even if poorly estimated, can lead to bias reduction on the estimated treatment effects, while the latter can be used to form groups of individuals which have different responses to the applied treatment, and analyze the impact of each variable in the estimated treatment effect.
  - https://arxiv.org/abs/1808.09507

TEACHING ASSISTANTSHIPS

INSPER Institute of Education and Research, São Paulo, São Paulo, Brazil

- Statistics 101 (Low Vision Student Tutor) — Sep 2018 – Present

University of São Paulo, São Paulo, São Paulo, Brazil

- Statistics 101 — Mar 2018 – Jun 2018
- Introduction to Exploratory Data Analysis and Statistical Models (Summer) — Jan 2018 – Feb 2018

- Time Series Analysis — Mar 2017 – Jun 2017

SCHOLARSHIPS

University of São Paulo, São Paulo, São Paulo, Brazil

- Master of Science Scholarship for Academic Excellence — Feb 2016 – Feb 2018
  - Grantor: National Council for Scientific and Technological Development (CNPq)

Federal University of São Paulo, Osasco, São Paulo, Brazil

- Institutional Program for Scientific Initiation Scholarships (PIBIC) — Aug 2012 – Aug 2014
  - Grantor: National Council for Scientific and Technological Development (CNPq)

CONFERENCES

2018 ISBA World Meeting, Edinburgh, Scotland — Jun 2018

- Poster Presentation: The Role of the Propensity Score in Bayesian Regression Tree Models for Causal Inference
  - Travel Award Winner

XIV Brazilian School of Bayesian Statistics (EBEB), Rio de Janeiro, Rio de Janeiro, Brazil — Mar 2018

- Poster Presentation: Sensitivity Analysis of the Propensity Score in Bayesian Nonparametric Models for Causal Inference
  - Travel Award Winner

XVII Time Series and Econometrics School (ESTE), São Carlos, São Paulo, Brazil — Aug 2017

- Listener

XV Regression Models School (EMR), Goiânia, Goiás, Brazil — Mar 2017

- Poster Presentation: Weekly Hospitalizations for Respiratory System Diseases of the Elderly in the City of São Paulo: Generalized Autoregresive Moving Average Models

XVII Business Administration Seminars (SEMEAD), São Paulo, São Paulo, Brazil — Oct 2014

- Oral Presentation: Forecasting Stock Prices with Panel Data Regression Models

XXII Scientific Initiation Congress, São Paulo, São Paulo, Brazil — Jul 2014

- Poster Presentation: Forecasting Stock Prices with Panel Data Regression Models

XXI Scientific Initiation Congress, São Paulo, São Paulo, Brazil — Jul 2013

- Poster Presentation: Forecast of Stock Returns with ARIMA-GARCH models

GRE

Score Report — Oct 2018

- Verbal Reasoning: 157 - 76th Percentile
- Quantitative Reasoning: 164 - 86th Percentile
- Analytical Writing: 3.5 - 41st Percentile

LANGUAGES

- Brazilian Portuguese (Native language)
- English (TOEFL-iBT - Score: 106) — Nov 2018
  - Reading: 29; Listening: 28; Speaking: 23; Writing: 26

PROGRAMMING

- LaTeX
- R
- C

[*CV compiled on 2018-11-12*]