Marcus L. Nascimento

Research Department
José Luiz Egydio Setúbal Foundation
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Professional Experience

José Luiz Egydio Setúbal Foundation — São Paulo, Brazil
Research Scientist — 2023–Current

Rio de Janeiro City Hall — Rio de Janeiro, Brazil
Advisor — 2021–Current

Accenture — Rio de Janeiro, Brazil
Data Science Analyst — 2018–2019

Accenture — Rio de Janeiro, Brazil
Data Science Assistant — 2015

Education

Federal University of Rio de Janeiro — Rio de Janeiro, Brazil
D.Sc. in Statistics — 2019–2024

- Dissertation: Bayesian quantile regression analysis of complex survey data under informative sampling.

Federal University of Rio de Janeiro — Rio de Janeiro, Brazil
M.Sc. in Statistics — 2016–2017

- Dissertation: Bayesian inference for finite mixture models of asymmetric distributions.

Federal University of Rio de Janeiro — Rio de Janeiro, Brazil
B.Sc. in Actuarial Science — 2011–2015

Research Interests

- **Method:** survey analysis, quantile regression, causal inference with observational data
- **Application:** health and social sciences

Other Experience

Federal University of Rio de Janeiro — Rio de Janeiro, Brazil
Research Assistant — 2023

- Project: Machine learning methods for predicting willingness to pay for tax debtors in Rio de Janeiro.

Getulio Vargas Foundation — Rio de Janeiro, Brazil
Research Assistant — 2022–2023

- Project: Machine learning methods for predicting preventable neonatal mortality in Brazil.

Institute for Applied Economic Research Rio de Janeiro, Brazil
Research Assistant 2019–2020

- Project: Economic Evaluation of Social Programs.

Institute for Applied Economic Research Rio de Janeiro, Brazil
Research Assistant 2017

- Project: The economic impact of broadband expansion in Brazilian municipalities.

Work in Progress

Under review

Nascimento, Marcus L. and Kelly M. Gonçalves. "A Bayesian approach to multiple-output quantile regression analysis under informative sampling".

Nascimento, Marcus L. and Kelly M. Gonçalves. "Bayesian quantile regression models for bounded count data under informative sampling".

Ramos, Antonio P., Fábio Caldieraro, Marcus L. Nascimento, and Raphael Saldanha. "Reducing Inequalities by Using an Unbiased Machine Learning Approach to Identify Births with the Highest Risk of Preventable Neonatal Deaths".

In preparation

Nascimento, Marcus L., Heudson T. Mirandola, Ralph S. Silva, and Leon U. Barboza. "A decision support system for tax arrears recovery based on machine learning survival algorithms".

Publications

Statistics

Nascimento, Marcus L. and Kelly M. Gonçalves. "Bayesian quantile regression models for complex survey data under informative sampling". *Journal of Survey Statistics and Methodology*, vol. 12, no. 4, 2024, pp. 1105–1130.

Cross-disciplinary

Nascimento, Marcus L. and Leonardo M. Barreto. "Improving crime count forecasts in the city of Rio de Janeiro via reconciliation". *Security Journal*, to appear.

Pre-Doctoral

Nascimento, Marcus L., Kelly M. Gonçalves, and Mario Jorge Mendonça. "Spatio-temporal instrumental variables regression with missing data: A Bayesian approach". *Computational Economics*, vol. 62, no. 1, 2023, pp. 27–49.

Nascimento, Marcus L. and Carlos Antonio Abanto-Valle. "Flexible robust mixture regression modeling". *REVSTAT, Statistical Journal*, vol. 20, no. 1, 2022, pp. 101–115.

Nascimento, Marcus L. and Kelly M. Gonçalves. “Bayesian variable selection in quantile regression with random effects: an application to Municipal Human Development Index”. *Journal of Applied Statistics*, vol. 49, no. 13, 2022, pp. 3436–3450.

Nascimento, Marcus L., Ralph S. Silva, Mario Jorge Mendonça, and Amaro O. Pereira. “Estimating the efficiency of Brazilian electricity distribution utilities”. *Journal of Applied Statistics*, vol. 49, no. 8, 2022, pp. 2157–2166.

Nascimento, Marcus L., Kalinca L. Becker, and Mario Jorge Mendonça. “Implications of Brazilian Institutional Guidelines on Educational Efficiency”. *Economía, the journal of LACEA*, vol. 21, no. 1, 2020, pp. 147–168.