# Marcus L. Nascimento

School of Applied Mathematics (EMAp) Getulio Vargas Foundation Rio de Janeiro, RJ 01228-200, Brazil Citizenship.: Brazilian/Italian

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## Professional Experience

**Getulio Vargas Foundation** Rio de Janeiro, Brazil Postdoctoral Researcher Oct 2024-Current José Luiz Egydio Setúbal Foundation São Paulo, Brazil Research Affiliate Oct 2024-Current Research Scientist Sep 2023-Sep 2024 Rio de Janeiro City Hall Rio de Janeiro, Brazil Jan 2021-Oct 2024 Advisor Accenture Rio de Janeiro, Brazil

AccentureRio de Janeiro, BrazilData Science AssistantSep 2015–Dec 2015

#### EDUCATION

Data Science Analyst

Federal University of Rio de Janeiro

D.Sc. in Statistics

Rio de Janeiro, Brazil

2019–2024

Federal University of Rio de Janeiro

M.Sc. in Statistics

Rio de Janeiro, Brazil

2016–2017

Federal University of Rio de Janeiro

Rio de Janeiro, Brazil

B.Sc. in Actuarial Science

2011–2015

## Research Interests

- Method: survey statistics and quantile regression
- Application: health and social sciences

## OTHER EXPERIENCE

#### Federal University of Rio de Janeiro

Research Assistant

Rio de Janeiro, Brazil Mar 2023-Aug 2023

Mar 2018-Feb 2019

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

## Getulio Vargas Foundation

Research Assistant

Rio de Janeiro, Brazil Jan 2022-Aug 2023 - Project: Machine learning methods for predicting preventable neonatal mortality in Brazil.

### Institute for Applied Economic Research

Research Assistant

Rio de Janeiro, Brazil Apr 2019–Dec 2020

- Project: Economic Evaluation of Social Programs.

#### Institute for Applied Economic Research

Research Assistant

Rio de Janeiro, Brazil Mar 2017–Dec 2017

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

# WORKING PAPERS

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. "An Expectation-Maximization algorithm for noncrossing Bayesian quantile regression analysis 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".

# **PUBLICATIONS**

#### **METHODS**

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.

#### APPLICATIONS

Nascimento, Marcus L. and Leonardo M. Barreto. "Improving crime count forecasts in the city of Rio de Janeiro via reconciliation". Security Journal, vol. 37, no. 4, 2024, pp. 1597–1618.

### 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.