MONIKA AVILA MÁRQUEZ

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I am an econometrician working on the use of machine learning to estimate econometric models, and methods for longitudinal data with clustering.

Skills: econometric analysis for panel data, double machine learning, generalized linear models, Bayesian estimation, regression analysis, statistical inference, mixed effects models.

EDUCATION

Ph.D. Econometrics (with Congratulations of Jury), University of Geneva — May, 2022
Committee: Prof. Stefan Sperlich (Chair), Prof. Aleksey Tetenov,
Prof. Jeffrey Wooldridge, Prof. Jaya Krishnakumar (Advisor).

Msc. Economics, Orientation: Econometrics (Highest Honors), University of Geneva — 2016

B.A. Economics (Highest Honors), University Juan Misael Saracho — 2008

EXPERIENCE

Lecturer (Pathway 1 Research and teaching), University of Bristol — September, 2023 - present
Research: Panel data or longitudinal data econometrics, mixed effects modeling, use of machine learning to estimate econometric models.
Teaching: Mathematics, Statistics and Probability, Econometrics.
Supervision: Master thesis supervision for Master in Economics and Data Science.

Postdoctoral Researcher Statistics, University of Geneva — August, 2022 - August 2023
Research: Mixed effects modeling.
Teaching: Statistics, Multivariate modeling

Consultant Department of Statistics, ILO — August, 2022 - April, 2023
Simultaneous equation modeling of macroeconomic data.
Structural Vector Autoregressive modeling.
Statistical analysis of European labor data.

Teaching Assistant, University of Geneva — 2016-2022
Delivered practical lectures for the following courses:
Graduate Level: Multivariate analysis, Advanced Econometrics, Microeconomics II.
Undergraduate Level: Statistics, Development Economics, Econometrics, Introduction to Econometrics, Introduction to Statistics.

Research Assistant, Prof. Jaya Krishnakumar, University of Geneva — 2016-2022
Developed a new estimation method for a class of panel data models.

Implementation of panel data estimation methods on Matlab, R and Stata.

Developed a semiparametric estimation method using Neural Networks.

Implementation of the semiparametric estimation method on Python and R.

Intern Department of Statistics, International Labour Organization — 2016

Statistical analysis of Mexican labour data.

Skill mismatch measurement in Mexican Labour Market.

Development of data analysis tool for labour and migration data of Arab Countries using STATA.

Sovereign Risk Analyst, Central Bank of Bolivia — 2012-2014

Sovereign risk assessment of the foreign exchange reserves investments.

Development of the early warning system.

Use of Bloomberg for sovereign and operational risk monitoring.

COMPUTER SKILLS

Computer Languages	Matlab, Python, Stata, R, Latex, Bloomberg.
Databases	SQL (Basic)

LANGUAGES

English (fluent, C2), French (fluent, B2), Spanish (native).

COURSES

Causal Inference Workshop, Northwestern University	2022
Advances in Financial Time Series Modeling, Study Center Gerzensee	2021
Recent Advances in Bayesian Macroeconometrics, Study Center Gerzensee	2019
Numerical Methods, Study Center Gerzensee	2019
Bayesian Econometrics, World Trade Institute	2018
Big Data in Finance and Economics, SoFie	2018
The identification of structural shocks in dynamic models, HEC Lausanne	2018

REFEREEING

Econometric Letters.

Journal of Human Development and Capability Association.

FELLOWSHIPS & AWARDS

Subside Tremplin, University of Geneva	2020-2021
Société Académique de Genève	2018
Scholarship Simon I. Patiño	2014-2016