

# João Jerónimo

📍 United Kingdom    ✉ jj2023@hw.ac.uk    ☎ 07818 960555    🌐 joao-jeronimo.com    in João Jerónimo  
🔗 JoaoJeronimoHW

## Summary

---

Doctoral researcher in Economics with expertise in macro-labour, econometrics, and applied data analysis. Skilled in R, Stata and Python for statistical modeling, data visualization, causal inference, and machine learning applications. Experienced in academic research, teaching, and policy-related projects. Seeking data analyst or economist roles to apply analytical skills to real-world economic and business challenges.

## Education

---

**Heriot-Watt University** Oct 2021 –  
*PhD in Economics*

- Research: Macro-labour, Econometrics
- **Coursework:** Advanced Macroeconomics I and II; Bayesian Econometrics

**University of Minho** Sept 2017 – Jan 2020  
*MSc in Economics*

- GPA: 18/20 (*summa cum laude*)
- **Coursework:** Economic Analysis, Econometrics, Financial Economics, Monetary Economics, Banking Economics, Insurances and Actuarial Calculus, Applied Econometrics, Applied Statistics, Advanced Analysis in  $\Re$ , Differential Equations, Geometry, Discrete Mathematics, Algebra

**University of Minho** Sept 2014 – Jun 2017  
*BA in International Relations*

- GPA: 16/20 (*magna cum laude*)
- **Coursework:** Economic policy, Political Philosophy, European Union Policy and Legislative Framework, Linear Algebra, Calculus, Mathematical Analysis. Econometrics I, Econometrics II, Physics I.

## Experience

---

**Doctoral Researcher** Edinburgh, UK  
*Heriot-Watt University* Sep 2022 –

- Wrote logistic and survival regression models to estimate firm-level supply elasticities and analyze its cyclical variation
- Worked with European administrative matched employer-employee data and wrote multiple R and Stata scripts for data visualization and analysis
- Implemented Gauss-Seidel algorithm to decompose high-dimensional two-way fixed effects optimization problem into smaller, sequential updates of parameter blocks, significantly reducing computational complexity and memory requirements
- Wrote structural economic model to predict response of labor market outcomes to policy changes and exogenous shocks

**Research fellow** Lisbon, Portugal  
*University of Lisbon* Jan 2019 – Jun 2021

- Data gathering, cleaning and analysis
- Streamlining data across multiple formats
- Automation of data extraction processes through web scraping using Python, resulting in significant reductions in weekly working hours
- Writing VBA scripts for simultaneous operations in large matrices, improving streamlining efficiency

## Publications

### Interactions between financial constraints and economic growth

Jul 2023

J. Jerónimo, A. Azevedo, P.C. Neves, M. Thompson

[10.1016/j.najef.2023.101943](https://doi.org/10.1016/j.najef.2023.101943) [↗](#)

## Awards

- UK Research and Innovation (UKRI) Scholarship for Academic Merits, 2021- 2024 (£57,711)
- National Award for Academic Merits, highest graded national students 2018/2019, MSc in Monetary, Banking and Financial Economics, University of Minho, Braga, Portugal (3170€)
- Excellence Award for Academic Merits, Full Tuition Reimbursement Academic Year 2017/2018, MSc in Monetary, Banking and Financial Economics, University of Minho, Braga, Portugal (625€)
- Excellence Award for Academic Merits, Full Tuition Reimbursement Academic Year 2015/2016, BA International Relations, University of Minho, Braga, Portugal (1064€)

## Projects

### How to Enhance Forecasts of the Scottish Economy with New Hire Wages and Machine Learning

[github.io.com/sfc](https://github.io.com/sfc) [↗](#)

- Independent project where I analyze the core methodology of a Scottish forecasting institution and develop two extensions/changes to enhance forecasting accuracy
- Tools Used: Python

### Inflation forecasting with Neural Networks

[github.com/ml](https://github.com/ml) [↗](#)

- Wrote and compared the relative performance of three classes of forecasting models - linear regression, random forests and neural networks - to predict quarterly CPI
- Tools Used: Python

### Inflation forecasting with Bayesian Econometrics

[github.com/ml](https://github.com/ml) [↗](#)

- Partially replicated work of Chan et al (2013) and estimated unobserved components moving average time series models, with and without stochastic volatility, to produce estimates of posterior inflation means
- Tools Used: MATLAB

### Bias estimation of lagged IV

[github.com/macro](https://github.com/macro) [↗](#)

- Application of Wang and Bellemare (2019) to estimate the least squares and IV bias of specifications using lagged instruments
- Tools Used: R, Stata

### Heterogeneous treatment effects

[github.com/RSM](https://github.com/RSM) [↗](#)

- Ongoing research project. Empirical validation of structural labor demand model. Heterogeneous diff-in-diff across deciles of policy exposure (sectoral minimum wage bite) prior to exogenous policy shock. Data visualization
- Tools Used: R

## Technologies

**Languages:** R (tidyverse, plm, lme4, dplyr, fixest), Stata, Python (pandas, scikit-learn, NumPy, beautifulsoup), MATLAB (BEAR toolbox), HTML + CSS

**Data:** Excel, VBA, SQL (beginner)

**Methods:** Causal inference, linear regression, panel data, time series, machine learning

## Others

Summer School in *Wage determinants*, with Prof. Derek Neal. Barcelona University, Spain (2023)

Summer School in *Modern Monetary Theory and European Macroeconomics*, with Prof. Dirk Ehnts. Maastrich University, Netherlands (2017)