

Ph.D. economist specializing in macroeconomics, causal inference, and machine learning. Experienced in building and calibrating large-scale computational models, developing efficient numerical algorithms, and extracting insights from high-dimensional data. Strong background in R and Python-based structural modeling and econometrics applied to economic and financial datasets. I have also lectured in advanced econometrics and intermediate macroeconomics. Before my Ph.D., I studied applied mathematics at the University of California, San Diego.

## EDUCATION

---

Boston University Aug 2020–May 2026  
Ph.D. in Economics [GPA:3.76/4.0]

University of California, San Diego Sept 2016–May 2020  
B.S. Applied Mathematics, cum laude [GPA: 3.97/4.0]  
B.A. Economics, highest distinction, cum laude [GPA: 3.90/4.0]

## Certifications

DeepLearning.AI, Machine Learning Specialization 2026

## SELECTED HONORS AND PRIZES

- [Seymour Harris Award](#) (University of California – San Diego, 2020)  
Most outstanding graduating senior in the economics department
- Dean’s Fellowship (Boston University, 2020)  
Full scholarship for 6 years to attend the university’s PhD program
- Best Second Year Paper Award (Boston University, 2022)  
Best research paper in my PhD cohort
- [Rosenstein-Rodan Prize](#) (2025)  
Best research paper in developing economics

## TECHNICAL SKILLS

---

[Coding] Python (Pytorch, Tensorflow, Pandas, Scikit-learn, Numpy), R, SQL, MATLAB, STATA, LaTeX, Microsoft Office, AWS  
[Modeling] General Equilibrium, DSGE, Heterogeneous Agent Models, Numerical Optimization, Bootstrapping, Monte Carlo simulations  
[Econometrics] Causal Inference, RDD, GMM, SMM, Time Series (ARIMA, VAR, SVAR), Cross-Validation, Bootstrapping  
[Machine Learning] Logit, Random Forests, XGBoost, Ridge/Lasso, Boosting, Hyperparameter Tuning, NLP, Text Analysis  
[Languages] Portuguese (Native), English (Fluent), Spanish (Fluent), German (Intermediate), French (Beginner)

## SELECTED PROJECTS

---

Machine Learning Portfolio 2026

- Kaggle Housing Prices prediction: Achieved top 17<sup>th</sup> percentile in a ML competition using [this](#) XGBoost and Random forest algorithm
- Kaggle Titanic: Achieved top 20<sup>th</sup> percentile in a ML competition using [this](#) Logit, XGBoost ensemble

[Quantifying the Macroeconomic Effects of Tax Competition](#), Boston University 2024-2025

- Quantified the macro impact of a proposed tax reform through **counterfactual GE analysis** in Python. Identified a +1.6% increase in GDP
- Designed and optimized a **fixed-point algorithm** using Python, reduced computation time by 4x relative to conventional methods
- Developed and optimized a **Simulated Method of Moments (SMM)** to calibrate model parameters to empirical bilateral trade flow data

[The Costs of Running a Minority Government](#), Boston University 2023

- **Estimated causal impact** of electoral outcomes on fiscal policy in R using RDD (24% higher labor spending under minority governments)
- Estimated heterogeneous treatment effects in a **multi-dimensional RD design**. Leveraged local linear regression for parameter estimates
- Assessed the validity of the quasi-experimental design providing evidence against manipulation at the cutoff and in-favor of continuity

[The Global Impact of Brexit Uncertainty](#), Boston University 2021-2022

- Analyzed large-scale earnings call transcripts using **NLP** to construct firm-level measures of sentiment and risk in a 6-person research team
- Applied **unsupervised machine learning to cluster** Brexit-related text snippets and identify key topic categories
- Optimized forecasting accuracy for financial indicators by developing and backtesting ARIMA/VAR models in R using **cross-validation**

[Campaign Connections](#), NBER and University of California, San Diego 2018-2021

- Cleaned and ensured statistical integrity of labor market datasets, implementing robust inference and multiple-testing corrections.
- Developed fuzzy matching algorithms in Stata and SQL queries to merge datasets scraped and mined from multiple sources

## EXPERIENCE

---

Lecturer/Teaching Fellow, Boston University Aug 2021 – Present

- Designed and taught an advanced econometrics course, delivering biweekly lectures on statistics and modern tools of causal inference.
- Received strong teaching evaluations: course organization (4.33/5.0), instructional methods (4.40/5.0), and teaching effectiveness (4.53/5.0).
- Taught intermediate macroeconomics. Topics included: SNA, International Economics, Mundell-Fleming model, and monetary policy