Doruk Gökalp

New York City, NY, USA - doruk.gokalp@nyu.edu - linkedin.com/in/dorukgokalp - dorukgokalp.com

Profile

PhD Candidate in Economics at NYU specializing in large-scale data analysis, statistical modeling, time-series econometrics, and machine learning for policy insights. Skilled in Python, R, C++, MATLAB, and distributed computing, with experience in predictive analytics, econometrics, and applied research.

Education

New York University 2021 – 2027 (Expected)
PhD in Economics
Coursework: Bayesian Methods, Machine Learning, Financial Economics

Universitat Pompeu Fabra 2020 – 2021
Master of Research in Economics

Barcelona School of Economics 2019 – 2020
M.Sc. in Economics and Finance — Ranked 1st in cohort

Middle East Technical University 2014 – 2019
B.Sc. in Mathematics and Economics — Double Major, High Honor

Technical Skills

Languages: Python, R, MATLAB, C++
Methods: Time-series forecasting, state-space and Markov-switching models, Bayesian estimation, structural modeling, panel and high-frequency econometrics, causal inference (IV, DiD, RD), signal extraction
Tools: Git, Stata, EViews, LaTeX, Excel; distributed and HPC computing (SLURM)

Experience

Research Assistant NYU, Jan 2023 – Jan 2025

- Built high-frequency forecasting and shock-decomposition models for asset price dynamics and macro news, integrating event-driven features into predictive pipelines.
- Scaled estimation workflows on HPC clusters using vectorization and parallelization to support large predictive workloads and rapid iteration.

Research Assistant Center for Research in International Economics (CREi), Apr 2020 – Sep 2021

- Developed and simulated macroeconomic models to forecast trade and policy shocks; executed counterfactual scenarios to quantify impacts.
- Delivered quantitative projections and reproducible MATLAB/Stata code that supported academic and policy analysis; documented assumptions and sensitivity checks.

Lecturer and Teaching Assistant NYU, UPF, BSE, METU 2020 – Present

- Lecturer for Undergraduate Econometrics; TA for Graduate Macroeconomics, Game Theory, and Statistics

Selected Projects

Accelerated IV-VAR Estimation Engine: Optimized dynamic variance decomposition workflows and reduced bootstrap runtimes from 128s to 8s (16x) through vectorization and parallel computing, enabling faster scenario generation and forecast-variance analysis.
Skills: IV-VAR, optimization, parallel computing *Stack:* MATLAB, Python, C++

Stock Market Belief Dynamics and News Events: Built Markov-switching state-space models on HPC clusters to capture regime shifts around news releases and to improve event-study forecasting on high-frequency data; project presented at macro and finance conferences.
Skills: Markov-switching, state-space modeling, high-frequency econometrics *Stack:* MATLAB, Python, SLURM

Textual Analysis of Central Bank Communications: Developed an NLP pipeline with LDA topic modeling and clustering to predict macro and sectoral responses to policy announcements using text-as-data methods; evaluated out-of-sample performance with standard accuracy metrics.
Skills: NLP, topic modeling, unsupervised learning, text econometrics *Stack:* Python

Academic Awards

- Outstanding Teaching Award, NYU (2025)
- Pass with Distinction, Microeconomics Core Exam (2022)
- MacCracken Fellowship, NYU (2021 – 2026)
- UPF GPEFM Fellowship (2020)