ARA PATVAKANIAN

arapatvakanian@gmail.com | (818) 306-8009 | Personal Website | LinkedIn

EDUCATION

B.A. in Mathematical Economics & Political Science, University of Pennsylvania   **2024**

Distinction in Mathematical Economics, Honors Thesis, Summa Cum Laude, Phi Beta Kappa

Visiting Graduate Student in Economics, Harvard University   **2025**

INTERESTS

Macroeconomics, International Economics, Macro-Finance, Time Series Econometrics

RESEARCH EXPERIENCE

Federal Reserve Bank of Boston, Senior Research Associate   **2024–2026**
– Technical research support for Egon Zakrajšek, Jenny Tang, Slavik Sheremirov, and Danilo Leiva-León
– Create data visualizations for policy briefings delivered to the president of the Boston Fed, compute local projections, identify tariff pass-through on disaggregated PCE and PPI/IP data, lead trainings on VARs/LPs, and automate estimation of Boston Fed's internal GDP nowcasting model, among others
– Data manipulation and model estimation of sign-restricted DFM to decompose PCE inflation into supply-driven, demand-driven, and idiosyncratic components in Leiva-Leon et al. (2025)
– Used high-frequency tick data to estimate proxy SVARs for the identification of impulse responses to monetary policy and central bank information shocks in Nunes et al. (2022)
– Provided research assistance for 2 Boston Fed policy brief publications: #1, #2

University of Pennsylvania, Research Assistant   **2022**
– Contributed to Professors Krueger and Fernández-Villaverde's textbook manuscript
– Created graphs of cross-country inequality (Lorenz curves) in MATLAB
– Used Penn World Tables and ERP data to visualize real GDP in PPP and world income distributions

WORKING PAPERS

"Modeling Macroeconomic Performance through Energy Sourcing Dynamics"   **2024**

Undergraduate honors thesis advised by Professors Jere Behrman and Francis X. Diebold
– Calibrated structural model of cumulative climate damages to long-run output using historical data
– Tracked lagged effects of damages on future economic performance to inform IAM damage functions

"Predicting Change in Macro-Financial Indicators Using Federal Reserve Statements"   **2022**

Term paper advised by Professor Karun Adusumilli
– Applied machine learning techniques to evaluate impact of Fed statements on macro-financial indicators
– Used NLP, random forests, and elastic nets to predict movements in inflation expectations and ETFs

COURSEWORK

Harvard University

 Graduate Macroeconomic Theory II

University of Pennsylvania

 Graduate Microeconomic Theory, Game Theory, Statistical Inference, Topics in Mathematical Logic

 Undergraduate Econometric Machine Learning, Bayesian Statistics, Microeconometrics, Real Analysis I
  & II, Linear Algebra, Differential Equations, Calculus I–III

LEADERSHIP & DISTINCTIONS

Graduation Flagbearer for Mathematical Economics	2024
Penn Economics Undergraduate Advisory Board (Chairman)	2022–2024
Penn Undergraduate Economics Society (Co-President)	2020–2024
Penn Armenian Students Association (Co-President)	2020–2024
Resident Advisor, University of Pennsylvania	2022–2024
New Resident Advisor of the Year	2023
Ross Prize for Best Essay in History of Philosophy, Department of Philosophy, U. of Pennsylvania	2024

MISCELLANEOUS

 Technical MATLAB, Python, R, Stata, Shell Scripting, Git, LATEX, Markdown

 Languages Armenian (Native), English (Native), Spanish (Fluent), French (Conversational)

 Citizenship USA

REFERENCES

University of Pennsylvania

Francis X. Diebold, Professor	fdiebold@sas.upenn.edu
Dirk Krueger, Professor	dkrueger@sas.upenn.edu
Karun Adusumilli, Assistant Professor	akarun@sas.upenn.edu

Federal Reserve Bank of Boston

Egon Zakrajšek, Executive Vice President & Director of Research	egon.zakrajsek@bos.frb.org
Jenny Tang, Vice President & Economist	jenny.tang@bos.frb.org
Slavik Sheremirov, Principal Economist & Policy Advisor	viacheslav.sheremirov@bos.frb.org