ARA PATVAKANIAN
RÉSUMÉ (2025 FEBRUARY)

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RESEARCH EXPERIENCE

Federal Reserve Bank of Boston, Research Department   **RA (Macro Monetary Group) | 2024–2026**
- Support Dr. Jenny Tang's research and the Boston Fed's monetary policymaking cycle through data analysis
- Create data visualizations for policy briefings delivered to the president of the Boston Fed, automate the Macro Monetary Group's policy-relevant charts, compute local projections and VAR models, separate pure monetary policy shocks from information effects, study financial markets using firm-level panel data, and decompose inflation into supply- and demand-side components
- Intersection of empirical macroeconomics, financial and monetary economics, and behavioral economics

University of Pennsylvania, Department of Economics   **RA (Prof. Dirk Krueger) | 2022**
- Created graphs in MATLAB of cross-country inequality (Gini & Lorenz curves)
- Obtained and wrangled data from Penn World Tables to visualize real GDP in PPP and world income distributions
- Contributed to Profs. Krueger and Villaverde's textbook manuscript entitled *Advanced Macroeconomics: A Dynamic Approach*

University of Pennsylvania, Department of Political Science   **RA (Dr. Karen Nershi) | 2021**
- Collected data and conducted event study analysis of negative news breaking on >200 banks' stock prices during 2000–2021

WORKING PAPERS

Modeling Macroeconomic Performance through Energy Sourcing Dynamics   **2024**
University of Pennsylvania, Department of Economics   **Thesis (Advisors: Jere Behrman & Francis X. Diebold)**
- Applied historical data to calibrate structural model of cumulative climate damages to long-run output
- Tracked lagged effects of damages on future economic performance using one-step-ahead VARs to inform IAM damage functions

Predicting Change in Macro-Financial Indicators Using Federal Reserve Statements   **2022**
University of Pennsylvania, Department of Economics   **Term Paper (Advisor: Karun Adusumilli)**
- Applied machine learning techniques to evaluate Fed press release statements and their immediate-to-short-term impact on various macro-financial indicators
- Leveraged LDA, hawkish-dovish sentiment scores, and controls for the U.S. macroeconomy as regressors in random forests and elastic nets to predict changes in market-based inflation expectations and exchange-traded funds (ETFs)

EDUCATION

B.A., Mathematical Economics & Political Science, University of Pennsylvania   **2024**
Mathematical Economics Flagbearer, Distinction in Mathematical Economics, Phi Beta Kappa, Summa Cum Laude, Thesis in Econ.
Graduate Visiting Student, Department of Economics, Harvard University   **2025**

RELEVANT COURSEWORK

Harvard University Macroeconomic Theory II (PhD)
University of Pennsylvania Microeconomic Theory (PhD), Game Theory (PhD), Probability Theory & Statistical Inference (PhD), Econometric Machine Learning, Bayesian Statistics, Real Analysis I & II, Linear Algebra, Differential Equations, Calculus I–III

SKILLS

Technical & Programming R, Python, Stata & Mata, MATLAB, Shell Scripting, LaTeX, Markdown, Git, Overleaf
Languages Armenian (Native), English (Native), Spanish (Fluent), French (Conversational)

LEADERSHIP & DISTINCTIONS

Penn Economics Undergraduate Advisory Board (Chairman); Penn Undergraduate Economics Society (Co-President); Penn Armenian Students Association (Co-President); Resident Advisor (2022–2024); Ross Prize for Best Essay in History of Philosophy