# ARA PATVAKANIAN
## RÉSUMÉ (2025 JANUARY)
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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
- Responsibilities include creating data visualizations for policy briefings delivered to the president of the Boston Fed, automating the Macro Monetary Group's policy-relevant charts, computing local projections and VAR models, and studying patterns in aggregate and financial variables using firm-level micro panel data
- 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
- Contributions included in Professors Krueger and Fernández-Villaverde's textbook manuscript entitled *Advanced Macroeconomics: A Dynamic Approach*

**University of Pennsylvania, Department of Political Science** — **RA (Dr. Karen Nershi) | 2021**
- Data collection and 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)**
- Used 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
- Used 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 & Thesis in Mathematical Economics | Phi Beta Kappa | Summa Cum Laude
**Graduate Visiting Student, Department of Economics, Harvard University** — **2025**

## RELEVANT COURSEWORK

**Harvard University** Monetary Economics with Heterogeneous Agents (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