

# ARA PATVAKANIAN

## RÉSUMÉ

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### RESEARCH EXPERIENCE

#### UPenn Dept. of Economics | Independent Research Philadelphia, PA | Oct. 2022 – Jan. 2023

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

Coauthors: Akhilesh Tumu and Patrick Zhang

- Working paper that applies machine learning techniques to evaluate Fed statements & their impact on various macro-financial indicators
- Found that Fed statements since 2008 can be empirically categorized through LDA as primarily focusing on either price stability or full employment
- 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)

#### UPenn Dept. of Economics | RA Remote | May – August 2022

- Research assistant under Prof. Dirk Krueger
- 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 upcoming textbook entitled *Advanced Macroeconomics: A Dynamic Approach*

#### UPenn Dept. of Political Science | RA Remote | May – July 2021

- Research assistant under Karen Nershi, PhD candidate
- Data collection and event study analysis on 200+ banks' and financial institutions' stock prices from 2000–2001
- Found that New York Times articles, Financial Times articles, and DoJ press releases about charges filed or conviction rulings against banks and other financial institutions do not significantly affect share performance in medium- to long-run

### EDUCATION

#### University of Pennsylvania 2020 – Present

B.A., Majors in Mathematical Economics & Political Science; Concentration in Political Theory;  
Minors in Statistics, Philosophy, & International Development

Graduation: Spring 2024 | Philadelphia, PA, USA  
Dean's List 2021–2022 & 2022–2023

#### Crescenta Valley High School 2016–2020

Graduation: June 2020 | La Crescenta, CA, USA  
GPA: 4.0/4.0 (Unweighted); 4.51/4.0 (Weighted)  
Summa Cum Laude

### SKILLS

#### Technical & Programming

R (Machine Learning); Python; MATLAB; LaTeX; Git;  
ArcGIS; Overleaf; Microsoft Office; Google Workspace

#### Languages

Armenian (Native); English (Native); Spanish (Fluent);  
French (Reading: Competent; Writing: Elementary)

### RELEVANT COURSEWORK

**ECON** | Microeconomic Theory (Graduate Level)

Game Theory (Graduate Level)

Econometric Machine Learning

Advanced Econometrics

Intermediate Macroeconomics

**MATH** | Real Analysis I & II

Linear Algebra | Calculus I–IV

**PSCI** | International Political Economy

### ACTIVITIES & DISTINCTIONS

Economics Dept. Undergrad. Advisory Board (Chairman)  
Penn Undergraduate Economics Society (Co-President)  
Penn Armenian Students Association (Co-President)  
College of Arts & Sciences Major Advisor & Peer Advisor  
Resident Advisor (Harrison College House)  
Pi Sigma Alpha (2022 Inductee)