ARA PATVAKANIAN
RÉSUMÉ

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WORKING PAPERS

Modeling Macroeconomic Performance through Energy Sourcing Dynamics – An Analytic and Empirical Treatment

UPenn Dept. of Economics | Honors Thesis
Advisor: Prof. Jere Behrman | Aug. 2023–Present

- Honors thesis with tentative topic of studying change in the energy sector from a macro perspective
- Integrates energy as an input in the standard neoclassical macro model and tracks dynamics using historical data

Predicting Change in Macro-Financial Indicators Using Federal Reserve Statements

UPenn Dept. of Economics | Term Paper
Advisor: Prof. Karun Adusumilli | Oct. 2022–Dec. 2022

- 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)

RESEARCH EXPERIENCE

UPenn Dept. of Economics | **RA (Prof. Dirk Krueger)**
Remote | **May–August 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 upcoming textbook entitled *Advanced Macroeconomics: A Dynamic Approach*

UPenn Dept. of Political Sci. | **RA (Dr. Karen Nershi)**
Remote | **May–July 2021**

- Data collection and event study analysis on 200+ banks' and financial institutions' stock prices from 2000–2001
- Found that negative articles and DoJ press releases about banks and other financial institutions do not significantly affect share performance in medium- to long-run

EDUCATION

University of Pennsylvania | **May 2024**

B.A., Majors in Mathematical Economics & Political Science; Concentration in Political Theory; Minors in Statistics, Philosophy, & International Development
Philadelphia, PA, USA
Dean's List 2021–2022 & 2022–2023

Crescenta Valley High School | **June 2020**

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

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

LEADERSHIP & DISTINCTIONS

Economics Undergrad. Advisory Board (Chairman)
- Advise Department Chair Francis X. Diebold in matters relating to economics courses and student experience

Penn Undergraduate Economics Society (Co-President)
- Lead student engagement with academic economics through discussion seminars, paper readings, etc.

Penn Armenian Students Association (Co-President)
College Major Advisor & Peer Advisor
Resident Advisor (Harrison College House)
Pi Sigma Alpha (2022 Inductee)