Pranjal Rawat

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Education

Ph.D. Economics, Georgetown University, USA	2021 - 2026
MS Economics, Madras School of Economics, India	2016 - 2018
BS Economics, Presidency University, India	2012 - 2016

Experience

Data Scientist (PhD Intern), Roblox, California — May 2024 - Aug 2024
- A/B test analysis of Gen-AI tools on creator productivity via Double Machine Learning.
- Evaluated impact of Studio features on creator productivity via Diff-in-Diff and propensity score methods.
- Conducted offline evaluation of contextual bandits for item level dynamic pricing within games.

Data Scientist (Assistant Manager), American Express, India — 2020 - 2021
- Implemented PyTorch Big Graph for matching 3mn merchants with 60mn US cardmembers.
- Developed an NLP-based name and address matching algorithm with 90+ F1 score for 60mn US cardmembers.

Data Scientist, American Express, India — 2018 - 2020
- Built large scale machine learning models for CTR prediction on marketing emails.
- Predicted attrition on email marketing.
- Built real-time outlier detection algorithm for flight streaming data.

Research Economist Intern, Reserve Bank of India — Jun 2017 - Aug 2017
- Built a new time series on state level business cycles.
- Decomposed trends and cycles, and used spectral methods to study co-movement.
- Applied Panel Vector Auto Regression to study impact of interest rates on state level growth rates.

PhD Working Papers

A Deep Learning Approach to Heterogeneous Consumer Aesthetics in Retail Fashion
Designing Auctions when Algorithms Learn to Bid: The critical role of Payment Rules
Literature Review on Reinforcement Learning in Economics and Finance (Oxford Papers, Forthcoming 2025).
Are LLMs Bayesian? Examining behavioural biases in Generative AI.

Other

- **Teaching (Grad Level):** Financial Markets, Advanced Data Analysis, Econometrics
- **Workshops:** Introduction to Python and Machine Learning (Madras School of Economics)
- **Service:** Cluster Compute Coordinator (PhD), Organizer for Research Cell (Masters)
- **Research Assistantships:** FinTech and Environment, What drives Indian Gold Import?
- **Pre-PhD Working Papers:** Inflation Targeting in the UK, Volatility in Indian State Business Cycles

Awards

Winner, Machine Learning Hackathon, American Express	2018
Winner, Reserve Bank of India, National Policy Challenge	2017
Gold Medallist, MS Economics, Madras School of Economics	2018
Gold Medallist, Physics and Chemistry, Gitanjali Senior School	2012

Skills

Languages: Python, SQL, PySpark, R, Stata, Julia, Matlab
Frameworks: PyTorch, JAX, Tensorflow, DoubleML, EconML, Prophet, Sklearn, Statsmodels
Certifications: Machine Learning and Deep Learning Specializations (Coursera)