Venkata Srirama Krishna Teja Konduri

tejakonduri.com • LANSING, MI • krishnateja128@gmail.com • (574) 220-4841 • linkedin.com/in/tejakonduri

SUMMARY

- **Empirical Economist** with 9+ years of experience in macroeconomic modeling, time series forecasting, and machine learning.
- **Proven expertise in delivering high-impact insights** across academia, tech, and government by developing production-ready models using Python, R, SQL, and Tableau.
- **Skilled at translating complex data into actionable intelligence** for policy, finance, and product strategy stakeholders.
- **Passionate about building scalable forecasting tools** and uncovering patterns in economic data to support inclusive and sustainable growth.

SELECTED EXPERIENCE

Economist, *Michigan Department of Treasury, Lansing, MI* Jan 2025 – Present

- **Lead researcher for Michigan's Corporate Income Tax (CIT)**, developing and validating revenue forecast models using administrative tax data and economic indicators.
- **Estimated the fiscal impact of proposed legislation** and existing tax incentives using simulation and scenario analysis.
- Collaborate cross-functionally with legislative analysts to produce fiscal notes and economic briefs under tight deadlines.
- Maintain and refine **production-level econometric models** to support statewide fiscal planning and budget negotiations.

Data Strategy Postdoctoral Fellow, *University of Notre Dame, Notre Dame, IN* Aug 2024 – Dec 2024

- Designed and developed Tableau dashboards to enhance data visualization and reporting capabilities for the university's Graduate School and Division of Student Affairs.
- **Automated data collection processes** streamlining the reporting pipeline for the Graduate School.
- **Lead efforts in external benchmarking**, collecting and analyzing data strategies from peer institutions to inform best practices for data-driven decision-making in Student Affairs.

Graduate Economics Researcher, *University of Notre Dame, Notre Dame, IN* Aug 2019 – Jun 2024

- **Increased forecast accuracy by 20%** for macroeconomic indicators such as income and employment, using advanced machine learning methodologies on the FRED-MD dataset with 60 years of historical data and 134 variables.
- **Pioneered the use of ensemble machine learning methods** (adaptive gradient boosting and PCA) to improve data dimension reduction, resulting in an **11%** enhancement in processing speed and model precision for real variables.
- **Developed econometric models** using local projections to assess the impact of oil supply shocks on U.S. monetary policy, finding that the Federal Reserve increases interest rates by **7.7 basis points** in response to a 10% increase in oil prices to manage inflationary pressures.

Economics Intern (PhD Internship), *Amazon.com, Bellevue, WA* Jun – Oct 2023

- **Developed a Bayesian Structural Vector Autoregression (SVAR) model** of the Amazon marketplace, effectively disentangling supply-driven and demand-driven shocks to assess their impacts across multiple product categories.
- **Evaluated the impact of supply chain improvements** by simulating a one-day reduction in delivery speed over a year, identifying a clear correlation between faster delivery and increased sales across various product categories.
- **Ranked product categories based on sales improvement** forecasts, creating visualizations to plot the highest to lowest expected sales growth, and providing actionable insights for category-specific business decisions.
- **Automated data analysis pipelines**, optimizing workflows, and reducing data retrieval time by collaborating with data engineers and integrating custom SQL queries in Amazon Redshift.
- **Presented key findings** to senior leadership, illustrating how supply chain enhancements could drive sales growth, influencing future strategic initiatives to improve delivery speed and customer satisfaction.

Research Associate, *Indian Institute of Management, Bangalore, India* May 2016 – Jul 2019

- **Co-authored a research paper on caste proximity and M&A outcomes**, influencing corporate governance dialogs.
- **Built and managed a comprehensive database of over 10,000 Indian firms**, mapping directors' last names to caste groups using large-scale matrimonial data, facilitating an econometric analysis of M&A likelihood based on cultural proximity.
- **Developed and applied the boardroom caste homophily index**, which successfully predicted M&A likelihood across industries, providing novel insights into the role of social networks in corporate decision-making.
- **Reduced data processing time by 80%** by designing and implementing an optimized R program, cutting the run time of a large-scale M&A analysis from 30 days to 6 hours, significantly improving research efficiency.
- **Presented research findings at academic conferences**, including the ACEGD 2018, effectively communicating the implications of caste-driven M&As to a diverse audience of economists and finance professionals.

Trainee Market Analyst, *Futures First, Hyderabad, India* Jul 2014 – Jan 2015

- Executed point-and-click trades on the Chicago Board of Trade using price action and technical analysis to formulate trading strategies for soybean oil futures and spreads.
- Reduced trading losses by 25% by analyzing market conditions; Used technical analysis to determine optimal stop loss.
- Authored daily reports on the intraday Soybean oil market movements and the impact of other commodities like Brent Crude, Soybean, Soybean Meal, Wheat, and Corn on Soybean Oil.

EDUCATION

PhD in Economics, *University of Notre Dame, Notre Dame, IN* Jun 2024
MA in Economics, *University of Notre Dame, Notre Dame, IN* Jan 2023
MS in Quantitative Economics, *Indian Statistical Institute, Delhi* Jan 2018
BE (Honors) in Computer Science, *Birla Institute of Technology and Science – Pilani, Hyderabad* Jul 2014

RESEARCH

- **Forecasting Macroeconomic Variables: A Systematic Comparison of Machine Learning Methods** (with Qian Li)

  Evaluates the forecasting performance of a wide set of machine learning models relative to traditional econometric benchmarks across 15 real, nominal, and financial macroeconomic indicators. Shows that ML models outperform benchmarks for real variables—especially during high-volatility periods such as recessions and the COVID-19 pandemic—and that dimension-reduction-based ML methods frequently rank among the most accurate at medium and long horizons.

- **The Role of Oil Price Shocks in Shaping Unemployment Dynamics**

  Uses local projections to study how structural oil price shocks affect unemployment rates and durations across U.S. states. Finds that oil supply shocks increase national unemployment and incidence, while economic activity shocks decrease both, particularly in oil-producing states. Inventory demand shocks have only temporary effects on unemployment durations.

- **Revisiting the Response of Monetary Policy to Oil Supply Shocks**

  Analyzes U.S., Canadian, and Swiss central bank responses to adverse oil supply shocks using local projections. The Federal Reserve raises interest rates both immediately and with a delayed second adjustment; Canada responds more aggressively to counter inflation; Switzerland initially holds rates steady to avoid currency appreciation, then gradually tightens as inflation persists.

- **Firms of a Feather Merge Together: Cultural Proximity and M&A Outcomes** (with Manaswini Bhalla, Manisha Goel, and Michelle Zemel)

  Investigates how shared caste identities between firm directors influence M&A activity in India. Shows that culturally proximate pairs are more likely to merge but that such deals create less value and show no improvements in negotiation or long-run performance—supporting the presence of agency costs rather than information benefits.

  Presented at: Early Career Women in Finance (2018), IIM Calcutta–NYU Stern India Research Conference (2018), NYU–NSE Conference (Mumbai), UC Irvine, University of Washington (Seattle), IIM Bangalore, and the 14th Annual Conference on Economic Growth and Development (ISI Delhi).

RELEVANT SKILLS

Data Analysis and Visualization: *R (Tidyverse, data.table, ggplot), Python (Pandas, Numpy), Tableau, SQL, Excel, Matlab, Stata*
Machine Learning: *Decision Trees, Random Forests, SVM, AdaBoost, XGBoost, Gradient Boost, kNN, Time Series Forecasting*
Project Management: *Communication, Organization, Stakeholder Engagement*
Data Strategy: *Expertise in streamlining data collection processes and creating visual reports for strategic decision-making.*