

**Education:**

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**University of California, Los Angeles**

- PhD, Economics (Empirical Industrial Organization) 2023
- MA, Economics 2020

**University of Virginia**

- BA, Economics (High Distinction) and Statistics 2016

**Technical Skills:**

**Programming Languages:** R, SQL, Stata

**Data Scientist Techniques:** Supervised Machine Learning, Ensemble Methods, Model Specification Testing, Instrumental Variable Regression, Causal Inference Techniques

**Economic Modeling:** Demand Estimation, Discrete Choice Frameworks, Structural Estimation Methods, Predictive Modeling, Counterfactual Policy Simulation

**Professional Experience:**

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**Cornerstone Research, Associate**

**September 2023–present**

- Experienced in antitrust casework on topics including mergers, algorithmic collusion, and vertical integration.
- Conducted economic analysis that led to Alaska Airlines, Hawaiian Airlines merger clearance by the DOJ.
- Built discrete choice models of demand using **Stata** to simulate consumer choices and predict policy impacts on prices and sales.
- Applied structural econometric modeling to analyze market competition, developing custom simulation algorithms in **R** to estimate demand elasticities and evaluate potential merger outcomes.
- Analyzed the feasibility of merger and divestiture scenarios, creating maps and tables leveraging **R** and **Excel** to evaluate market concentration under varying geographic and product market definitions.
- Designated and managed teams of **3–6** data analysts for **9 month** long projects in order to perform data cleaning, data visualization, and document reviews.

**Amazon, Economist – Intern**

**June 2022–August 2022**

- Worked on the People Experience and Technology Central Science (PXTCS) team in order to optimize warehouse staffing levels.
- Designed auction based mechanisms by reviewing academic literature and interviewing internal teams about successful current processes which led to increased on time shipping performance.
- Performed simulations using **Python** to forecast the financial cost of auction mechanisms based on historical labor data.

**Cornerstone Research, Analyst**

**July 2016–September 2018**

- Utilized data science techniques such as Regression Analysis, Big Data Management, and Data Visualization to calculate damages and show causality in support of PhD experts during legal testimony.

**Hospital Merger**

- Analyzed insurance claims data in **SAS** to determine the relative bargaining power of hospitals and insurers.
- Normalized prices based on service quality in **R** to allow for comparisons across specialties within a hospital system.
- Examined the causal relationship between market concentration and quality-adjusted prices to determine the hypothetical impact of the proposed merger on patients.

**ERISA**

- Investigated 401(k) participant investment patterns to determine how 401(k) plan participants are individually impacted by the choice of investment options offered by the plan.

- Developed and implemented a new algorithm in **R** to assess new damages that reduced runtime by over **66%**.

### **Rule 10b-5**

- Implemented event study methodology in **Stata** to calculate damages resulting from inflation in stock price.
- Queried news databases and reviewed articles to determine what information was new and relevant to the at-issue decline in stock price.

### **Commodities Consulting**

- Analyzed options trades to ensure the proper commodity-hedging strategy was followed.
- Determined improper futures transactions that resulted in unnecessary exposure to the underlying commodity and the resulting gains/losses.

## **Teaching Experience:**

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### **Instructor**

- Econ 11: Microeconomic Theory Summer 2021
- Econ 97: Economics Toolkit Fall 2021

### **Teaching Assistant**

- Econ 5: Econ for Everyone Winter 2021, Spring 2022
- Econ 11: Microeconomic Theory Winter 2020, Spring 2020, Fall 2020, Spring 2021, Winter 2022
- Econ 106P: Pricing and Strategy Fall 2019

## **Research Papers:**

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### **New Product Introductions, Retailer Learning, and Pricing** (Job Market Paper)

- **Summary:** Modeled cross-market demand for new products to analyze how retailers optimize their pricing strategies and product rollouts across a national network of stores.
- **Techniques:** Random Utility Models, Simulation-based Estimation Methods, Counterfactual Simulation Design, Boosted Regression Trees

### **High Frequency Traders Slow Information Revelation**

- **Summary:** Analyzed the competitive interaction between high-frequency traders and information-based investors in a game theory model. Demonstrated how HFTs' speed advantages improve market liquidity while simultaneously slowing the incorporation of new information into asset prices.
- **Techniques:** Game Theoretic Modeling, Comparative Statics