

# Nicholas Di

+1 (408) 805 9401 - [nd56@rice.edu](mailto:nd56@rice.edu) - [Linkedin](#)

## EDUCATION

### Rice University

PhD Statistics GPA: 3.9

Houston, TX, USA

Aug 2023 - May 2028 (Expected)

### Macalester College

BA Economics (Honors), BA Applied Mathematics/Statistics GPA: 3.96

Saint Paul, MN, USA

Aug 2018 - Dec 2022

## PUBLICATIONS

- **Di N.** 2022. Gendered labor market outcomes during COVID-19: Evidence from early withdrawal of Federal Pandemic Unemployment Compensation. *The Developing Economist*. (Won Best Undergraduate Paper Award)  
[Paper Link](#) [News Link](#)

## RESEARCH EXPERIENCE

### PRS-RV Causal Pivot: A Segmentation Approach to Complex Disease Genetics

Advised by Dr. Chad Shaw (Baylor College of Medicine)

May 2024 - Aug 2024

- Developed a model categorizing diseases into four types using Polygenic Risk Scores (PRS) and rare variants (RV), showing that RV-PRS exclusion can aid in disease discovery
- Tested the model on UK Biobank data for hypercholesterolemia, breast cancer, and Alzheimer's disease, finding significant negative correlation between RV and PRS in affected individuals

### Gendered Labor Market Outcomes During COVID-19

Advised by Dr. Amy Damon (Macalester College)

Jun 2022 - Aug 2022

- Conducted independent research on the gender-specific effects of the cessation of Federal Pandemic Unemployment Compensation during the COVID-19 pandemic
- Collected and analyzed data from the U.S. Census Bureau; collaborated with a Federal Reserve researcher to gain deeper insights and validate findings.

### Causal Inference

Advised by Dr. Leslie Myint (Macalester College)

May 2019 - Aug 2019

- Created a causal diagram by building a correlation matrix through R and fed into Tetrad, a causal search program
- Conducted a meta-research study of cancer biological research using PLoS and Semantic MEDLINE abstract outputs

## WORKING EXPERIENCE

### Analyst

Ernst and Young, Quantitative Economics and Statistics, Washington D.C, USA

Jan 2023 - June 2023

- Collaborated with major environmental ESG (Environmental, Social, and Governance) consulting firms to evaluate, optimize, and elevate ESG scores for numerous corporate clients.
- Performed econometric and statistical, predictive forecasting, and fiscal impact modeling for business and government clients on a broad range of topics including relocation decisions, federal and state policy, tax, and vaccine distributions.

### Research Assistant Intern

Brattle Group, Boston, USA

Jun 2022 - Aug 2022

- Supported leading academics in applying sophisticated econometric and statistical models to legal, regulatory, and policy issues.
- Utilized mathematical software to model and solve linear, nonlinear and mixed-integer optimization problems related to electricity demand.

### Analyst Intern

Ernst and Young, Quantitative Economics and Statistics, Washington DC, USA

Jun 2021 - Aug 2021

- Developed and maintained comprehensive databases on Medicare cases and compliance with healthcare standards and regulations
- Worked on various projects related to economic policy analysis, impact analysis, survey design, and statistical sampling and analysis

### Business Development Manager

NutriKarma, New York NY, USA

August 2020 - May 2021

- Expanded NutriKarma team by 11 employees and worked project management, specifically with app-wire flow, data sets, and marketing
- Conducted and ran meetings with potential angel investors, business partnerships, dietitians, and personal trainers

### **Business Analyst Intern**

*U.S. Bank, Minneapolis MN, USA*

*Jun 2020 - Aug 2020*

- Facilitated projects regarding classification of product types for document custody services and preformed in-depth data and business analysis for automation of loan certification process

### **Business Data Analyst**

*Minnesota Association of Volunteer Administration, Minneapolis MN, USA*

*Oct 2018 - May 2019*

- Wrote R-scripts to compute regression models regarding membership recruitment data for over 500 clients
- Developed outreach plans regarding local organizations and sponsorship, and updated internal resources for manager to keep information and schedules up to date

### **AWARDS**

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- **AAAS Annual Conference Statistics Travel Award** in AAAS - 2024
- **Dean's Prize** in Rice University - 2023-2025
- **Best Undergraduate Paper Award** in Midwest Economics Association Conference - 2022
- **Summa Cum Laude** in Macalester College - 2022
- **Phi Beta Kappa** in Macalester College - 2022
- **Deans List All Semesters** in Macalester College - 2018 - 2022

### **TEACHING ACTIVITIES**

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- **Rice University**
  - Teaching Assistant, STAT 425: Introduction to Bayesian Inference
  - Teaching Assistant, STAT 405/605: Data Science in R
- **Macalester College**
  - Teaching Assistant, COMP 123: Introduction to Computer Science
  - Teaching Assistant, STAT 155: Introduction to Statistical Modeling
  - Teaching Assistant, ECON 194: Calculus Based Principles of Economics
  - Teaching Assistant, STAT 253: Statistical Machine Learning
  - Supplemental Instructor, ECON 381: Econometrics

### **PRESENTATIONS**

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- **American Association for the Advancement of Science** American Statistical Association Panel - 2024
- **Spatial Analysis of Lead Levels in Twin Cities Metro Area** Capstone Seminar in Macalester College - 2022
- **Economics Independent Research** Midwest Economics Association - 2022
- **Causal Inference Research** Jr. Faculty-Hub Summer Research Fund Meeting, Macalester College - 2019

### **UNIVERSITY SERVICES**

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- **Statistics Student Seminar Organizer** Rice University - 2024
- **STAT 450 Project Judge** Rice University - 2022
- **Graduate Student Representative** Rice University - 2023