Terrence Dai

October, 2025

CONTACT INFORMATION

Department of Economics, University of Washington
SAV 319C
E-mail: terrence.dai15@gmail.com

(608) 609-8150
Personal Website
LinkedIn

PROFILE

Applied Ph.D. economist and Data Scientist with extensive experience in consulting, applied research, and industry data science. Skilled in causal inference, machine learning, and Bayesian modeling to evaluate impacts and behavior. Proficient in Python, R, and SQL, with a track record of building predictive models, deploying them in production, and translating complex analyses into actionable insights. Experienced in collaborating with cross-functional teams in diverse settings. Passionate about leveraging data and economic reasoning to solve high-stakes problems in dynamic, data-rich environments.

EDUCATION

University of Washington — **Seattle, WA**
Ph.D. in Economics — *2026 (Expected)*
M.A. in Economics — *2022*

University of Wisconsin - Madison — **Madison, WI**
B.S. in Mathematical Economics, Political Science — *2016 – 2019*
Minor: Business Administration

FIELDS

Causal Inference, Applied Microeconomics, Development Economics

SKILLS

Programming: R(Stan), Python(sklearn, EconML), SQL(BigQuery), Stata, LaTex

Causal Inference: Difference-in-Difference, Synthetic Control, Double Machine Learning, Causal Forest, Propensity Score Matching, Regression Discontinuity, Event Study

PROFESSIONAL EXPERIENCE

Analysis Group — **New York, NY**
Summer Associate — Jun - Aug 2025

- Designed and implemented strategies to assess economic liability and damages
- Reviewed and audited Python and R code used for analyzing large datasets across diverse casework
- Synthesized complex findings into accessible narratives for expert reports in areas of antitrust, finance, and M&A, supporting economic and legal arguments on causality
- Managed and coordinated cross-level workstreams with analysts and senior team members to ensure timely delivery of research, analysis, and client-facing outputs

Arizona Diamondbacks — **Seattle, WA**
R&D / Data Science Intern — Jan - May 2025

- Built and deployed predictive models from scratch using machine learning and Bayesian models to forecast outcomes and improve decision-making and implemented models in the production environments
- Designed and automated interactive dashboards and data visualizations for production to derive data-driven insights and support front office decision-making
- Supported the Director of R&D in implementing long-term research projects and strategies
- Collaborated with members of R&D team to improve existing models and projects using causal techniques
- Presented and communicated ideas and findings to key stakeholders with various backgrounds

Major League Baseball **Seattle, WA**
Data Analytics Intern Jun - Aug 2024
- Managed, cleaned, and analyzed existing large relational databases using SQL
- Leveraged emerging data sources to derive novel insights and develop new metrics for production using machine learning and Bayesian models
- Assisted the Statcast team in devising and implementing long-term strategy
- Presented and communicated research at conferences and to a broad audience

Department of Economics, UW-Seattle **Seattle, WA**
Research Assistant for Prof. Alan Griffith Mar - Oct 2023
- Collected and scraped voting and campaign donation data from websites and electronic files using Python
- Coordinated communications with California local election officials to acquire policy information and convey research project details
- Conducted causal analysis on the impact of a multiple-match campaign funding program on campaigns and elections in the U.S. using synthetic control

GRADUATE RESEARCH

The E-commerce Revolution: Unraveling the Impact of Taobao Villages on Migration in China
- Evaluates the impact of e-commerce development on rural–urban migrants' return and settlement intentions in contemporary China
- Provides novel evidence that greater e-commerce prevalence at home increases migrants' willingness to return
- Reveals the continuing constraints of the household registry (Hukou) system in shaping migration decisions
- Modeling Methods: Two-way fixed effects difference-in-difference with continuous treatment, double machine learning, causal inference
- Coding Skills: Python (Polars, EconML), R
- Working Paper

Bridging Gaps: Unpacking the Effects of China's Nationwide Health and Services Equalization Initiative Among the Migrant Workforce

The Price of Playing Hard: Contract Incentives and Risk-Adjusted Effort in Baseball
with Matthew Grimm

Road to the Show: the Long Term Economic and Performance Impact of Major League Promotion Timing

ACADEMIC SERVICE

Referee
Journal of Economic Behavior and Organization

Student Referee
Pacific Conference for Development Economics (PacDev) 2023

TEACHING EXPERIENCE

Instructor
Department of Economics
- Intermediate Microeconomics
- Intermediate Macroeconomics

Teaching Assistant
Department of Economics
- Data Science for Strategic Pricing

Department of Statistics
- Introduction to Probability and Statistics

Center for Quantitative Science
- Introduction to Probability and Statistics

Guest Lecturer
Department of Economics
- Sports Economics

REFERENCES

Dr. Rachel Heath (Co-Chair)
Professor of Economics
University of Washington

Dr. Alan Griffith (Co-Chair)
Associate Professor of Economics
University of Washington

Max Glick
Director of R&D
Arizona Diamondbacks

Jason Bernard
Senior Manager of R&D
MLB Statcast