Diego Escobar Salce

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Economics | Causal Inference | Machine Learning

Economist and Data Scientist fascinated by computer science and experienced in managing projects involving predictive analysis using Machine Learning and statistical tools for causal inference to drive evidence-based decision-making.

Education

Ph.D. in Public Policy
The University of Chicago, U.S.,
Expected Jun 2023
Fields: Econometrics (Econ. Dept.), Labor Economics, Education

M.S. in Computational Analysis and Public Policy (MSCAPP)
The University of Chicago, U.S.,
Expected Jun 2023

M.A. in Economics
Pontifical Catholic University of Chile (Ranked #1 in Latin America by Times Higher Ed. & QS; #3 by USNews), Santiago, Chile, 2014
Cohort ranking: 4/33. Magna cum laude. Thesis maximum honors.

B.A. in Economics
Pontifical Catholic University of Chile (PUC Chile), Santiago, Chile, 2013

Cohort ranking: 22/260. Magna cum laude.

Technical Proficiencies

Advanced: Python | R | SQL | Stata
MATLAB | AWS S3/EC2 | Git | Torch
ScikitLearn | Tensorflow | Keras

Intermediate: PySpark | GIS | Tableau

Selected Coursework

IBM AI Engineering Professional Certif.

Prob. Programming & Deep Learning

Probabilistic Graphical Models

Optimization Conscious Econometrics

High-Dimensional Econometrics

Machine Learning for Public Policy

Databases Structures Design

Advanced Econometrics I, II, III

Qualifications Summary

- 9 years of experience conducting data-intensive economic research by exploiting advanced statistical/econometric modeling to answer real-world questions.
- Advanced statistical and mathematical skills. Theoretical and practical knowledge of methods for causal inference, forecasting, machine learning, frequentist and Bayesian statistics, sampling, optimization, and natural language processing (NLP).
- Experience modeling using structured large datasets, semi-structured data such as JSON/HTML, and non-structured data such as text and images.
- Proficient communicator with experience presenting research and teaching students of different levels and backgrounds with outstanding student reviews (4.8/5.0).

Professional Experience

The University of Chicago, Chicago, IL — 2017 – Present
Ph.D. Researcher

Steer end-to-end functions associated with deploying experimental and quasi-experimental methods, from data collection and processing to analysis and visualizations.

- Studied the causal effect of education screening practices on students' sorting across schools and their outcomes, using quasi-experimental methods, individual and group/cluster experimentation, and simulations to estimate counterfactuals.
- Constructed novel data sources by web scraping and matching them with millions of fuzzy entity names using random forests to link them to administrative datasets, obtaining 91 percent precision.
- Classified grant descriptions using deep/transfer learning in Python for efficiently labeling hundreds of thousands of entries.
- Managed classes and led recitation sessions with students as a teaching assistant to 20 Advanced Econometrics, Machine Learning, and Economics courses.

J-PAL (Research Center funded at MIT), Santiago, Chile — 2015 – 2017
Research Associate

Managed projects, analyzed data, and produced and interpreted results of experimental evaluations (AB/Randomized Controlled Trials/RCT) implementing behavioral economics interventions, collaborating with J-PAL's global researchers' network across countries.

- Fostered productive relationships collaborating with technical and non-technical partners such as 3ie, the Chilean Ministries of Education and Pensions, and NGOs.
- Managed projects timeline and produced deliverables for grantmakers and partners.

PUC Chile, Economics Department, Santiago, Chile — 2014 – 2015
Research Assistant (Full Time)

Researched using quasi-experimental methods such as instrumental variables, RDD, panel data methods, and demand estimation, collaborating on multiple simultaneous projects.

- Measured labor force responses to government regulations by coding model calibrations and simulations in MATLAB using optimization techniques.
- Extracted and georeferenced plant-level data based on census images using GIS.