

Álvaro Carril

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New York City, NY 10025, USA

EDUCATION

- **Princeton University** 2018 - 2024
M.A. & Ph.D. in Economics Princeton NJ, USA
 - Advisors: Leah Boustan, David S. Lee, and Maria Micaela Sviatschi
- **University of Chile** 2013
B.A. in Business and Economics (with Distinction) Santiago, Chile

EXPERIENCE

- **Princeton School of Public and International Affairs** 2025 - Ongoing
Lecturer in Econometrics New Jersey, USA
 - Designed and taught lectures in statistics and econometric modeling and programming at the undergraduate and graduate levels
- **Revelio Labs** 2024 - Ongoing
Economist New York, USA
 - Conducted analysis on workforce dynamics using high-frequency labor data to advise hiring processes.
 - Developed machine learning models to predict salary and labor market transition dynamics.
- **ConsiliumBots** 2020 - 2024
Research Affiliate & Project Manager New York, USA
 - Conducted independent research on educational & financial decisions using empirical and structural methods.
 - Designed and implemented large-scale field experiments and RCTs to measure biased beliefs and the effect of information on educational choices.
- **National Bureau of Economic Research (NBER)** 2017 - 2018
Research Associate Boston MA, USA
 - Estimated the effect of major & institution choice on labor market outcomes using Regression Discontinuity methods.
 - Published a peer-reviewed paper on covariate balance with a large number of clusters in random treatment assignments.
- **The Abdul Latif Jameel Poverty Action Lab (J-PAL)** 2016 - 2017
Research Associate Santiago, Chile; Santo Domingo, The Dominican Republic
 - Estimated the effect of changes in international taxation on firm-level investment using Difference-in-Differences methods, which spawned a separate research project (see Research).
 - Led a team of 8 research assistants and developed software to automatize the digitization and processing of historical data at scale, recovering university admission information for multiple projects.
- **Enseña Chile (Teach for All)** 2014 - 2015
High School Teacher Santiago, Chile
 - Taught mathematics, physics, and Python programming in a low-income school.
 - Developed Excel workshops for the local school community.

TECHNICAL SKILLS

- **Programming Languages:** Python, R, Julia, Stata, \LaTeX (advanced); Typescript, Lua, Bash (working knowledge)
- **Web Technologies:** CSS, HTML, Jekyll, Hugo
- **Database Systems:** SQL (MySQL, Snowflake), DynamoDB
- **Data Science & Machine Learning:** TensorFlow, PyTorch, sklearn

- [WP.1] **The Role of Information in the Demand for College Loans: Evidence From a Chatbot in Colombia**, with Christian Posso and Juan Saavedra. *Job Market Paper*.
- [IP.3] **College Admissions and Preferences for Students**, with Eduard Boehm.
- [IP.2] **Schedule Optimization and Teacher Allocation Frictions**, with Alejandro Robinson-Cortés.
- [IP.1] **Inverse probability weighting for subgroup analysis in RD settings**, with Andre Cazor, Maria Paula Gerardino, Stephan Litschig, and Dina Pomeranz.
- [J.1] Carril, Alvaro (2017). **Dealing with misfits in random treatment assignment**. *Stata Journal*, Vol. 17, Issue 3, pp. 652-67. DOI: <https://doi.org/10.1177/1536867X1701700307>

SELECTED PROJECTS

- **Icfesbot** 2021 - 2023
 - Designed a chatbot that surveys students about higher education degrees and financing options, finding that most students have incorrect beliefs about them.
 - Embedded multiple information experiments to understand the mechanisms behind loan misallocation, finding that most students are unaware of the complete choice set and tend to overestimate loan costs.
 - Led a 6-person interdisciplinary team that annually deployed a chatbot to $\approx 100,000$ high school seniors in coordination with the Ministry of Education and other PIs.
 - Developed data pipelines and back-end services to provide accurate information, and refined cold-start recommendation system by A/B testing ML models, resulting in better recommendations for students.
- **OsoBot** 2023 - Ongoing
 - Designed and developed a chatbot to help students explore occupations and corresponding career paths.
 - Pioneered evaluating the effectiveness of custom LLMs in delivering reliable and relevant educational information at scale.
 - Deployed chatbot to 50,000 students in Bogotá (Colombia) in coordination with the local government.
- **Timetable Designer** 2023 - 2024
 - Developed software to improve and democratize access to school timetabling solutions, improving teacher allocation in public schools in Chile and Mexico.
 - Innovated on an algorithm that utilizes notions from market design to find welfare-improving solutions quickly (otherwise an NP-hard problem).
- **Agricultural Device Optimization** 2023 - 2024
 - Developed an algorithm to help small farms optimize the installation of “agricultural” devices in a discrete grid, which implied a 45% reduction in costs of devices and agrochemicals.
 - Partnered with UPL and the Ministry of Agriculture in Chile to deploy this algorithm as a new industry standard.

TEACHING

Princeton	Advanced Microeconomics, MPA (TA)	2021, 2023, 2024
	Advanced Microeconomics, Junior Summer Institute (Instructor)	2022
	Graduate Fintech	2022
PUC	Econometrics, Graduate summer course (Instructor)	2017
U. Chile	Microeconomics and Advanced Econometrics, Undergraduates (Head TA)	2012-2014

SELECTED HONORS AND AWARDS

- **Social Data Science Graduate Fellow** 2023
Data-Driven Social Science Initiative, Princeton University
 - Granted for graduate research at the technical and methodological forefront of quantitative social sciences.
- **Overdeck Education Innovation Fund** 2021, 2022
Princeton School of Public and International Affairs
 - Awarded to support creative, interdisciplinary research projects addressing important issues in education (Icfesbot).
- **AI for Human Agency Grant** 2022
The Agency Fund
 - Grant to support projects that leverage technology and AI to enhance human agency (Icfesbot)
 - Awarded to Icfesbot team at ConsiliumBots

ADDITIONAL INFORMATION

Languages: Spanish (native), English (fluent), Italian (basic)

Nationality: Chilean - Spanish citizen