ÁLVARO CARRIL

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EXPERIENCE

Economist, Revelio Labs — New York, NY — *July 2024 – Ongoing*

- Conduct analysis on workforce dynamics using high-frequency data for internal and external stakeholders
- Develop and deploy machine learning models to predict salary and labor market transition dynamics

Project Manager & Senior Data Scientist, ConsiliumBots — New York, NY — *2020 – 2024*

- 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 choices using Instrumental Variables methods

Research Analyst & Data Scientist, National Bureau of Economic Research — Cambridge, MA — *2017 – 2018*

- 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

External Consultant, Inter-American Development Bank — Recife, Brazil — *2022 – 2023*

- Analyzed administrative data to identify teacher assignment gaps in the publich school system of Recife for 500 schools
- Proposed several policies to address teacher shortages, analyzing general equilibrium effects for 8,000 teachers

Research Associate & Data Scientist, J-PAL — Chile & Dominican Republic — *2016 – 2017*

- Estimated the effect of changes in international taxation on firm-level investment using Difference-in-Differences methods
- Led 8 research assistants and developed software to automatize digitization and processing of historical data at scale

SELECTED PROJECTS

IcfesBot (link ↗) — Colombia — *2021 – 2024*

- Designed a chatbot that surveys and informs students about higher education degrees and financing options
- Led data science team that annually deployed chatbot to ≈100,000 users in coordination with the Ministry of Education
- Developed data pipelines (SQL and NoSQL) and multiple back-end services (AWS Lambda & API Gateway)
- Refined cold-start recommendation system by tuning and A/B testing different machine learning models

OsoBot (link ↗) — Bogotá, Colombia — *2023 – Ongoing*

- Designed and developed a chatbot to help students explore occupations and corresponding career paths
- Developed and evaluated the effectiveness of custom LLMs in delivering reliable and relevant educational information
- Deployed chatbot to 50,000 students in Bogotá in coordination with local government

EDUCATION

Princeton University, Princeton, NJ — *June 2024*
Ph.D. in Economics
Specialization: Labor Economics, Industrial Organization

Princeton University, Princeton, NJ — *2020*
M.A. in Economics

University of Chile, Santiago, Chile — *2013*
B.A. in Business & Economics

COMMUNICATION & TEACHING EXPERIENCE

Graduate Teaching Assistant, Princeton University — Princeton, NJ — *2020 – 2023*

- Organized and taught precepts in Microeconomics, Fintech and Econometrics at the graduate and undergraduate levels

High School Teacher, Teach For All — Chile — *2014 – 2016*

- Taught mathematics, physics and Python programming in a low-income school

SELECTED HONORS & AWARDS

Social Data Science Graduate Fellow, for research at the technical forefront of quantitative social sciences — *2023*
Overdeck Education Fund, to support creative, interdisciplinary research on important issues in education — *2021, 2022*
The Agency Fund Grant, to support projects that leverage AI to enhance human agency — *2021*
Princeton University Graduate Fellow, funded stipend and tuition — *2018 – 2023*

SKILLS

- **Languages:** Python, R (+ Shiny), Julia, SQL (highly proficient); Typescript, Lua, Bash (working knowledge)
- **Frameworks:** *AWS:* Lambda, API Gateway, EC2, DynamoDB, Aurora; *ML:* TensorFlow, PyTorch, sklearn; Docker
- **Statistics & Methods:** Causal Inference (RCT, IV, DiD, RDD), Structural / Statistical Modeling