BENJAMIN LEIVA SILVA

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EDUCATION

Department of Computer Science & Harris School of Public Policy, University of Chicago

Master of Science in Computational Analysis and Public Policy

Chicago, IL

2023 - 2024

Instituto de Economia, Pontificia Universidad Catolica de Chile

Master of Science in Economics (two votes of distinction, distinguished thesis)

Teaching Assistant: Macroeconomics, Econometrics

Santiago, Chile

2017 - 2018

Facultad de Economia y Negocios, Universidad de Chile

Bachelor of Science in Economics (distinction, merit scholarship)

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• Teaching Assistant: Economics, Microeconomics, Political Economy, Macroeconomics

Santiago, Chile 2012 – 2016

WORK EXPERIENCE

GENERATIVE AI IN EDUCATION HUB, STANFORD UNIVERSITY

Senior Research Data Analyst

Stanford, CA

Sept 2024-present

MHE LAB, UNIVERSITY OF CHICAGO

Machine Learning Data Scientist Intern

Chicago, IL June 2023 – May 2024

• Built Python data pipeline from text data to identify and group topics/values in textbooks using embeddings and OpenAI's API

CHILEAN ANTITRUST AUTHORITY

Santiago, Chile

Economist/Data Scientist, Market Studies Division

Feb 2019 - Sep 2022

- Computed data-driven analysis and visualizations for policy recommendations in <u>education</u>, <u>healthcare</u>, <u>energy</u>, <u>procurement</u>, and <u>social safety nets</u> markets along with cross-functional team; with estimated annual welfare gains of US\$521M-1,504M
- Built end-to-end data pipelines from large, unstructured datasets, and performed statistical analyses in Python, R, SQL, Stata
- Designed, run, and analyzed multiple causal experimental designs, A/B tests, and user-centered surveys
- Led private and public stakeholder meetings and communicated insights and results to technical and non-technical audiences

CHILEAN CENTRAL BANK

Santiago, Chile

Intern, Department of Analysis and Forecasts

Jan 2015 - March 2015

• Programmed first stage of an inflation prediction model in R

CODING PROJECTS

FULL STACK WEB APPLICATIONS

Genomics Annotation Service, Cloud Computing (Link to code)

- Developed a **Python**, **Flask**-based frontend and cloud-based backend in **AWS** for uploading, storing, retrieving genomics results *Route Rangers: A transit planning tool for citizens and policymakers* (Link to code)
- Created ETL data pipeline in **Python** for ingesting US Census data, as well as a route planning tool in **JavaScript**.

GENERATIVE AI, LLM, NLP

Dirty Comments and Clean Plates: Using real and fake restaurant reviews to predict failed health inspections (Link to code)

• Simulated user reviews using GPT-3.5 and GPT-4 models and zero- and few-shot prompting through OpenAI's API in Python

MACHINE LEARNING, DEEP LEARNING, COMPUTER VISION

Predicting Pneumonia from X-Ray Images (Link to code)

Built Convolutional Neural Network and Logistic Regression models in Python using TensorFlow, Scikit-Learn, and Pandas

DATA ENGINEERING, DATA VISUALIZATION, DATA STORYTELLING

COVID-19 Online: How people interacted with government websites during the pandemic (Link to code)

• Examined trends in Gov website traffic over the course of the pandemic, using analytics.usa.gov and NYTimes data in **Python**