

JESICA MARIA RAMIREZ TOSCANO

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PROFILE

- **Motivation:** Passionate about discovering how machine learning can (and should) address social issues
- **Soft Skills:** Team player, Resourceful, Problem solving
- **Technical Skills:** Exploratory Data Analysis, Econometrics, Causal Inference, Supervised ML
- **Programming Skills:** Python, C#, R, SQL, HTML, JavaScript

EDUCATION

University of Chicago

September 2019 - June 2021

Master of Science in Computational Analysis and Public Policy

Honors Distinction

Relevant Coursework: Causal Inference (2 courses), Machine Learning (2 courses), Databases, Data Visualization, Computer Science Applications (2 courses)

Universidad de las Américas Puebla, Mexico

August 2012 - June 2017

Bachelor in Economics

Magna Cum Laude Distinction

1st Place in the Empirical Research Thesis Regional Competition in Puebla

July 2017

PROJECTS

- **Neural Networks and Social Polarization:** *Predicting Polarization From News Outlets Tweets.* I built a convolutional neural network using PyTorch and trained the model to learn the social polarization of the comments given a tweet posted by a news media outlet. This research aims to contribute to creating a more civil and less polarized space for discourse on social media.
- **Web Scrapping and Time-Series Prediction:** *Hohonu: Water Level Monitoring.* Given the lack of quality and standardized water level data, I collaborated in the pipeline development that cleans, calibrates and predicts local water level data. Scrapped data from +200 URLs to obtain standard measures (datums) needed in the calibration and optimized previous VAR model predictions with additional external data.
- **Classification and Prediction:** *COVID-19 in Mexico: Predicting severe disease outcomes.* Used balanced and weighted Random Forest Models to predict individual deaths and hospitalizations from government data.
- **Databases and App Management:** *Mapping Crimes at a Certain Day and hour with Mexico City.* Built a web-app to provide information on the average number of crimes that happened at a specified place in Mexico City using Google's API and +2million observations from the City Government's API.

PROFESSIONAL EXPERIENCE

Uber Technologies Inc

September 2021 - Present

Data Scientist

Legal Data

- Current work includes: statistical analysis and data investigations for litigation and regulators; development of models of litigation risk and exposure; producing datasets to external parties; and translating ambiguous legal questions into specific data-driven answers.

Deep Dive

June 2020 - August 2020

Data Science Intern

- Collaborated in the development of the company's NLP pipeline, and used various NLP methods such as LDA and Clustering of Word Embeddings and Document Embeddings to classify and group more than 50,000 Mexican News into 10 main topics (e.g. sports, public policy, international news).

Banco de México (Central Bank)

Economist

August 2017 - August 2019

General Directorate of Economic Research

- Built an algorithm using NLP methods to assess the tone of communication (i.e. neutral, restrictive, expansive) of Banco de Mexico's policy statements (+80 policy statements over the 2008-2019 period)
- Used market instruments (i.e. swaps, bonds) and survey data to obtain inflation expectations and expected target rate for 1 month to 3 years ahead. This information guided monetary policy decisions.