JESICA MARIA RAMIREZ TOSCANO

+1(773)986-4994 ◇ jramireztoscano@uchicago.edu ◇ ◇

PROFILE

- **Motivation:** Passionate about discovering how can (and should) machine learning address social issues
- **Soft Skills:** team player, autodidact, problem solving
- **Technical Skills:** Exploratory Data Analysis, Econometrics, Causal Inference, Supervised ML
- **Programming Skills:** Python, C#, R, SQL, HTML, JavaScript
- **Languages:** English & Spanish (Fluent), & French (Intermediate-B1)

EDUCATION

University of Chicago ***September 2019 - Present***

Master of Science in Computational Analysis and Public Policy

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

• **Web Scrapping and Time-Series Prediction:** *Hohonu: Water Level Monitoring.* Scrapped data from +200 URLs to obtain standard measures to calibrate local water level data. After imputing anomalies, one-month data (+8k observations) was used to predict 4 days of water level with VAR model.

• **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 patient data.

• **Databases and App Management:** *Mapping Crimes at a Certain Day and hour with Mexico City.* Built a web-app with DJANGO and SQLITE 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.

• **Object Oriented Programming and Game Design:** *Climate Change Video Game.* Developed an educational video game with Unity and C# about Climate Change for 10 to 12-year-olds.

• **Data Visualization:** *Chronic Crime Behavior through the lens of Mental Health.* Made a dynamic data storytelling about the rates of recidivism in the U.S. with JavaScript and d3.

PROFESSIONAL EXPERIENCE

Deep Dive ***June 2020 - August 2020***

Data Science Intern (Part-time)

· 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.

Banco de México (Central Bank) ***August 2017 - August 2019***

Economist in the Directorate of Economic Studies *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)

· Analyzed market instruments such as inflation-indexed bonds, swaps of the inter-bank interest rate, and survey data to obtain inflation expectations, risk premium, and expected target rate for 1 month to 3 years ahead.