Alejandro Beltran

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# EXECUTIVE SUMMARY

Researcher and project manager with +7 years of experience using data to tell stories and managing diverse projects from launch to completion. Expert in policy analysis, natural language processing, big data manipulation, and statistical inference for making complex decisions. Specialist in subnational fiscal management and state capacity in Mexico and Latin America.

# EDUCATION & HONORS

[**University of Arizona,** School of Government and Public Policy Tucson, AZ](https://sgpp.arizona.edu/people/alejandro-beltran)

PhD in Government and Public Policy May 2021

* Public Policy, Latin American Politics, Fiscal Decentralization, Quantitative Methods,
* [Fellow, Summer Institute in Computational Social Science, Duke University 2020](https://sicss.io/2020/duke/people#:~:text=Alejandro)
* [APSA Fund for Latino Scholarship](https://politicalsciencenow.com/meet-alejandro-beltran-aguirre-2019-fund-for-latino-scholarship-recipient/) 2019

MA in Government and Public Policy May 2018

* Capstone: Taxing and Relaxing: Competitive Elections and Punctuations in Taxation

**Universidad Autónoma de Sinaloa,** Facultad de Estudios Internacionales y Políticas Públicas Culiacán, MX

Licenciatura en Políticas Públicas, June 2015

* Fellow, Rumbo Joven 100, SEP, Gobierno de México ($15,000 award) 2014
* Book: Verdugo López and **Beltran Aguirre.** (2017). “Ciudades, Desarrollo Urbano, y Autonomía Financiera: Dilemas para la Gobernanza Local en México.” *Juan Pablos Editor. Culiacán*.

# PROJECTS AND LEADERSHIP

**Dissertation Research** Tucson, AZ

*Accounting for Corruption: Evaluating State Audit Agencies in Mexico* January 2018 – May 2021

* Estimated the probability of municipalities sanctioned by performing a linear probability model with fiscal and electoral data.
* Retrieved the monetary value of missing municipal funds through the implementation of natural language processing and machine learning in extracting information from audit reports in python, [code and presentation available here.](https://www.beltranalejandro.com/post/audits)

**Shaping Horizons: Social innovations for diplomacy** Remote

*Mentor: Fintech for Inclusion* November 2020 - Present

* Advised an international team of young leaders in developing a project supporting financial inclusion in Mexico.

# PROFESSIONAL EXPERIENCE

**Inter-American Development Bank** Washington DC

*Data Science and Decentralization Consultant* June 2021- Present

* For the Fiscal Management Division, developed databases on municipal finance of various countries in Latin America.
* Supported the development of the 2021 Sector Framework Document on decentralization and fiscal management, provided policy recommendations on the future of decentralization policies in Latin America.

**University of Arizona** Tucson, AZ

*Postdoctoral Research Associate*  August 2021-Present

* Utilize big data to study the effects of climate change and natural disasters on migrations patterns from Central America.
* Manage a team of junior research assistants in the compilation of data and assist in the writing of technical reports.

**University of Arizona** Tucson, AZ

*Graduate Research Assistant* August 2016 – May 2021

* Utilized **python** to create data processing pipelines that transformed digital text into event data for use in **causal inference**.
* Accelerated the data generating process by implementing **machine learning** classification, managed and trained multiple teams of international research assistants on annotating text, this reduced classification times from months to 3 weeks.
* Publication: [Osorio, and **Beltran**. (2020). Enhancing the Detection of Criminal Organizations in Mexico using ML and NLP. *IEEE-IJCNN*](https://ieeexplore.ieee.org/document/9207039)*, p.1-7*
* Publication: [Osorio, Reyes**, Beltran** andAhmadzai. (2020). Supervised Event Coding from Text Written in Arabic: Introducing Hadath. *LREC-AESPEN,* p.49-56](https://www.aclweb.org/anthology/2020.aespen-1.9/)

**D&P Creative Strategies** Washington, DC

*Public Policy Intern* October 2014 – January 2015

* Enhanced policy advocacy with Members of Congress by generating policy briefs contextualized to Member constituencies.
* Represented clients and their policy issues by lobbying Congressional staff through formal and informal meetings.

# SKILLS

* **Programming Languages:** Python, R, SQL, LaTex, **Stata**, ArcGIS.
* **Data Analysis:** Causal Inference, Natural Language Processing, Machine Learning, **GIS**, Network Analysis, Predictive Modeling, Classification, Regression, Forecasting, Time Series Analysis, Text Analysis, Logistic Regression.
* **Other Skills:** Native **Spanish**, Native **English**, Reading Portuguese, Hypothesis testing, Experimental design, Survey management, Qualtrics, Project management, MS Office, Data collection, Data visualization, Online teaching, Training.
* **Policy Expertise:** Fiscal decentralization, Bureaucratic performance, Elections, Corruption, Violence, Drug trafficking.