ALEJANDRO BELTRAN

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CURRENT POSITION

The Alan Turing Institute	**London, UK**
Postdoctoral Research Associate, Public Policy Programme	*June 2022-Present*

EDUCATION

University of Arizona	**Tucson, AZ**
PhD, Government and Public Policy	*May 2021*

Dissertation: *Accounting for Corruption: Evaluating State Audit Agencies in Mexico*
Committee: Edella Schlager (Chair), Javier Osorio (Co-Chair), Brint Milward

University of Arizona	**Tucson, AZ**
MA, Government and Public Policy	*May 2018*

Universidad Autónoma de Sinaloa	**Culiacán, MX**
Licenciatura en Políticas Públicas,	*June 2015*

International Exchange Student: University of New Mexico, 2013-2014
International Exchange Student: The Washington Center, 2014-2015

PREVIOUS POSITIONS

Inter-American Development Bank	**Washington, DC**
Fiscal Management Division	*2021-2023*
Data Science & Decentralization External Consultant	

University of Arizona	**Tucson, AZ**
Postdoctoral Research Associate, School of Government and Public Policy	*2021-2022*

University of Arizona	**Tucson, AZ**
Research Associate, School of Government and Public Policy	*2018-2021*

University of Arizona	**Tucson, AZ**
Teaching Assistant, School of Government and Public Policy	*2016-2018*

D&P Creative Strategies	**Washington, DC**
Public Policy Intern, Government Relations	*2014-2015*

Senate Majority Whip's Office	**Santa Fe, NM**
Public Policy Intern	*2013*

Universidad Autónoma de Sinaloa	**Culiacán, MX**
Research Assistant, Facultad de Estudios Internacionales y Políticas Públicas	*2012*

RESEARCH PAPERS

Book

Ciudades, Desarrollo Urbano y Autonomía Financiera: Dilemas para la Gobernanza Local en México, with Mercedes Verdugo López, Juan Pablos Editor, Culiacán, 2017 (in Spanish)

Peer-Reviewed Articles

"Fiscal Data in Text: Information Extraction from Audit Reports using NLP", Data & Policy vol 5, 2023

"Enhancing the Detection of Criminal Organizations in Mexico using ML and NLP", with Javier Osorio, IJCNN 2020, Proceedings of the IEEE World Conference on Computational Intelligence, Glasgow, July 2020.

"Supervised Event Coding From Text Written in Arabic: Introducing Hadath", with Javier Osorio, Alejandro Reyes, and Atal Ahmadzai, Proceedings of AESPEN 2020, Language Resources and Evaluation Conference, Marseille, May 2020: 49-56

Conference Papers

"Defining the Structural Determinants of Tax Compliance", APSA, Los Angeles, Sept. 2023

"Paying the Piper: Government Advertising and Media Bias", APSA Pre-Conference in Political Communication, Los Angeles, Sept. 2023

"Birds of a feather: A method for detecting suspicious clusters of companies in the UK", IC2S2, Copenhagen, July 2023

"Birds of a feather: A method for detecting suspicious clusters of companies in the UK", NetSci, Vienna, June 2023

"More bang for the buck: Estimating the electoral returns of a co-opted media", EPSA, Glasgow, June 2023

"Paying the Piper: Government Spending and Media Bias in Mexico", MPSA, Chicago, April 2023

"Fiscal Data in Text: Information Extraction from Audit Reports using NLP", Data Analytics for Anticorruption in Public Administration Symposium, Washington DC, October 2021

"Accounting for Corruption: Evaluating Audit Institutions in Mexico", APSA, Seattle, October 2021

"Politics as Usual: Evaluating Audit Agency Performance in Mexico", APSA, San Francisco, September 2020

"The Fentanyl Connection: Violence at Mexican Ports", MPSA, Chicago, April 2020

"Is no news really good news? Media reports of gender-based violence and perceptions of women's rights in Mexico", with Alexis Work, MPSA, Chicago, April 2020

"The Fentanyl Connection: Violence at Mexican Ports", 4 Corners Conflict Network Conference, Tucson, January 2020

"Tracking Drug Trafficking Organizations in Mexico using Web Scraping and NLP", CSS Mini-Conference, Tucson, December 2019

"Is no news really good news? Media reports of gender-based violence and perceptions of women's rights in Mexico", with Alexis Work, The Public and Democracy in the Americas Conference, LAPOP, Bogota, October 2019

"The Fentanyl Connection: Violence at Mexican Ports", Red de Estudios Sobre Drogas en America Latina, Mexico City, October 2019

"Protecting My Friends: Corruption Networks in Mexico", APSA, Washington DC, September 2019

"Taxing and Relaxing: How Competitive Elections Fuel Punctuations in Taxation", MPSA, Chicago, April 2019

RESEARCH EXPERIENCE

Modelling for Policy Theme The Alan Turing Institute.   *June 2022 - Present*
Postdoctoral Research Associate,
    -Developed scripts to compile over 12 million rows of information on firms in the UK.
    -Processed networks of firm ownership to detect clusters of same owner firms.
    -Used machine learning to train a suspicious entities classification algorithm, more info at: https://turingcss.org/

Analyzing Migration Patterns From Central America
Postdoctoral Research Associate,   *September 2021 - May 2022*
    -Scraped 1.5M news articles from Central America on migration and violence.
    -Used natural language processing to extract information from articles, project info available here.

Dissertation Research
Accounting for Corruption: Evaluating Audit Agencies in Mexico,   *January 2019 - May 2021*
    -Used a linear probability model with fiscal and electoral data to predict audits.
    -Extracted data from audit reports using NLP and ML, code and presentation available here.

Organized Criminal Violence Event Data in Mexico
For Javier Osorio, PhD   *January 2018 - Dec. 2020*
Graduate Research Associate,
    -Hired and trained 12 Spanish speaking students to collect and classify news articles.
    -Developed a web-scraping tool that automated the collection of 150,000 articles.
    -Built a text classifier using BERT, CNN, and others. Published in IEEE-IJCNN 2020.
    -Project info available at: www.ocved.mx

A Nested Mixed-Methods Approach to Armed Non-State Actor Governance and the Rule of Law Minerva Research Initiative Award No. 71623-LS-MRI.   *January 2018 - Dec. 2020*
Graduate Research Associate,
    -Led an international team of 10 students in generating NLP data in Spanish and Arabic.
    -Built online surveys using Qualtrics for deployment in Colombia and Afghanistan.
    -Built a text classifier published in LREC-AESPEN 2020, more info at: colombiaarmedactors.org

Sustaining Modern Infrastructure For Political And Social Event Data,
OAC-NSF Award No. 1931541.   *January 2020 - Dec. 2020*
Graduate Research Associate,
   -Led an international team of 3 students in generating a multi-label gold standard of record.
   -Scraped a news repository and performed topic modelling using LDA on collected articles.
   -Used preassigned tags to build a One Vs Rest classifier and compared results to GSR.

Modernizing Political Event Data for Big Data Social Science Research,
RIDIR-NSF Award No. 1539302.   *January 2018 - May 2019*
Graduate Research Associate,
   -Led an international team of 5 students in developing an ontology of event data in Spanish.
   -Annotated text data for NER and dependency parsing ML models using Brat annotation tool.
   -Debugged UD Petrarch for integration with CoreNLP and UDPipe.

FELLOWSHIPS & AWARDS

Russell Sage Foundation Summer Institute in Computational Social Science   *2021*
Teaching Assistant, organized at The University of Arizona
Russell Sage Foundation Summer Institute in Computational Social Science   *2020*
Participant, organized at Duke University
REDESDAL Travel Scholarship   *2019*
$1,200 Travel Award
LAPOP Travel Scholarship   *2019*
$1,000 Travel Award, -(Co-author accepted)
APSA Fund for Latino Scholarship   *2019*
$500 Award
GPSC Travel Grant   *2019*
$500 Travel Award
SGPP Travel Grant   *2018, 2019, 2020*
$500 Travel Award
SGPP Summer Fellowship   *2017 & 2018*
$2000 Award
Medalla Luis F. Aguilar Villanueva   *2015*
Academic distinction award for Undergraduate studies,- Universidad Autonoma de Sinaloa
Rumbo Joven 100 Fellowship   *2014*
$15,000 Fellowship for studying in Washington DC,- SEP, Gobierno de Mexico

SPECIALIZED TRAINING

Research Software Engineering with Python   *2023*
-Organized by the Skills Team at The Alan Turing Institute -Learned how to develop open-source
code.
ArcGIS Workshop   *2019*
-Learned how to do geospatial analysis using ArcGIS mapping software.
LATEXWorkshop   *2019*
-Training on using LATEXfor professional papers and presentations .
World Bank Development Economics Workshop: Governance and the Law   *2017*
-Training on using the World Development Report 2017 data.
Seminar on Campaign Strategies   *2015*
-Organized by George Washington University.

PROFESSIONAL SERVICES

Mentor:
-Engage with Latinx students at UArizona to discuss issues important to our community.
-Meet with potential graduate students and offer guidance on grad school applications and offers.
Reviewer for:
-Policy Studies Journal
Active Member:
-Institute of Electrical and Electronics Engineers (IEEE)
-IEEE Computational Intelligence Society
-Midwest Political Science Association
-American Political Science Association

TECHNICAL STRENGTHS

Modeling and Analysis	Causal Inference, NLP, Machine Learning, GIS, Network Analysis
Programming	R, Python, Qualtrics, STATA, SQL, ArcGIS, Perl, LaTeX