Anzony Quispe

MSc.Economics · San Andres University - Argentina
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Education

Universidad de San Andres — *Buenos Aires, Argentina*
Master in Economics — *2022*
- **Advisors**: Prof. Walter Sosa Escudero
- **Courses**: Real Analysis, Big Data and Machine Learning, Applied Economics

Universidad Nacional Agraria La Molina — *Lima, Peru*
Bsc in Economics — *2015-2020*
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Experience

Sciences Po — *Paris, FR*
Research Assistant — *2025-Present*
- I worked as a repository maintainer for the `did_multiplegt_dyn` packages in **R** and **Stata**, answering statistical questions and contributing updates to both codebases.
- I developed a **Python** implementation of `did_multiplegt_dyn` using `Polars`, achieving a $\sim 20\times$ speedup relative to the fastest available **Stata** implementation.
- I developed a **Python** implementation of `did_had` for continuous treatments in settings where all units are untreated in period 1 and treated in period 2 with heterogeneous doses, leveraging quasi-stayers in an RD-style framework.
- I implemented an automated debiased machine learning framework to estimate difference-in-differences estimands under continuous treatment.

Princeton University SPIA — *Princeton, NJ*
Research Specialist — *2023-2025*
- I worked with **satellite data** to assess the impact of land security on deforestation and agriculture exploring heterogeneous effects for low and high baseline areas, land conflicts, protected areas and suitable banking districts. We found positive effects at subdistrict level on both outcomes but located in different places.
- Use of **Hybrid Single-Particle Lagrangian Integrated Trajectory model (HYSPLIT)** for modeling particles dispersion and trajectory of crop burning fires in North India using HPC in linux machines.
- **Sensitivity analysis of standard errors** based on population distribution for a RCT under missing treatment allocation.
- Applying **matching methods** for estimation of PESA adoption on Deforestation
- Generation of **Downwind indicator** at pixel level and pollution of neighboring districts using wind direction from CAMS dataset
- **Transboundary pollution** calculation using HYSPLIT model and VIIRS and MODIS fire dataset.
- Estimation of the effect of politicians motivation on bureaucrats performance in deforestation for India using RDD and geospatial tools with python.
- **Air pollution calculation (Pm2.5)** for 206 countries using Parallel Computing and Geospatial Tools with Python. We exploit CAMs and Washington data.
- **Estimation of the effect of turnovers** in air pollution (PM2.5) using RDD.
- I optimize default libraries and adapted them for dealing with very large datasets **(rdrobust)**. This package takes too much time constructing estimation because of matrix inversion and matrix multiplication. It is very inconvenient when we have very large number of observations (50M) and few columns. I implement column matrix multiplication using C++ methods which make estimation 10 times faster.

EconomicAI — *Hamburg, Germany*
Data Scientist — *2021-2022*
- I predict car ignitions using kernel density estimations. We generate confidence intervals for this estimations and highest density regions
- I use double debiased machine learning to estimate **the effect of superhost** on Airbnb purchases and price elasticities for a online retail company.
- I collaborated on the tutorial notebooks in DoubleML Sandbox.

Carleton University Economics Department — *Ottawa, Canada*
Research Assistant — *2021-2022*
- I generate a consistent database for Peru at the district level in the span of 82 years based on the census 1940, 1961, 1973, and 1981. I used state-of-the-art Deep Learning models such as Layoutparser and Amazon Web Services (AWS) to get the information from scanned documents. I exploit Peruvian Law Database to generate consistent geographical units registering every split, merge, or creation of new districts. We recorded more than 80 years of geographical history at the district level.

Deptartment of Economics Yale University — *New Heaven, CT*
Research Assistant — *2020-2021*
- Worked with Ph.D. Max Perez Leon, writing functions in Julia, Stata, MATLAB, Python, and R to estimate the implicit weights in the estimation of average treatment effect (ATE) using different approaches such as Matching Approach (Nearest Neighbor, Kernel), Regression Approach (Linear Model, Sieves Functions), and Partial Linear Model on regression discontinuity designs.
- Generation of a library with all the functions written in Python.

Deptartment of Economics PUCP — *Lima, Peru*
Research Assistant — *2021*
- I worked with **Prof. Pavel Castellanos** using LLM model to check the aggressive tone of ILO reports.
- I estimate the effect of land titles on electoral results using a diff-and-diff strategy weighting observations with propensity score.

Work in progress and Publications

Using did_multiplegt_dyn to Estimate Event-Study Effects in Complex Designs: Overview, and Four Examples Based on Real Datasets with Clement de Chaisemartin et. al.

From Paper to Digital: Understanding the Ecological Impacts of India's Land Records Reform Presented at APSA 2024 with Aliz Toth and Saad Gulzar

Political Incentives and Environmental Regulation with Annalisa Pezone, Gemma Dippopa, and Saad Gulzar

Reassessing the Impact of Democracy on Growth and Environment with Gemma Dippopa, Saad Gulzar and Rodrigo Grijalba

Boundary Discontinuity Design

From Closed Form to Black Box? A Comparison of Debiased vs Automatic Debiased Machine Learning in the Sharing Economy

Statistical software and Open Source

csdid.py - Difference-in-Differences including Double Robust Estimation-with **Pedro H. C. Sant'Anna, Alexander Quispe** - **170,000 downloads (PyPI)**

did_multiplegt_dyn.py - R, Stata and Python package Difference-in-Differences for Intertemporal treatments -with **Clement de Chaisemartin**

did_had.py - Python package Difference-in-Differences for Continuous Treatments -with **Clement de Chaisemartin**

npiv.py - Python package for nonparametric estiamtors of Instrumental Variables -with **Xiaohong Chen**

GeoAgent - Agent to work with Geospatial Data -with **Jesus Gastañaduy**

Books

Anzony Quispe and Alexander Quispe (2021). Inference on Causal and Structural Parameters using ML and AI with Python and Julia, used in the course 14.38 at MIT.

PhD Courses

MIT Economics

2025 **High Dimensional Econometrics**, Prof. Victor Chernozhukov
2025 **Econometrics and Data Science**, Prof. Josh Angrist

Princeton University

2024 **Statistical Theory and Methods**, Prof. Matias Cattaneo

Awards, Fellowships, & Grants

2022 **Partial Scholarship for academic excellence**, UdeSA
2018 **Award for Excelent Research**, UNALM, *$ 500*

Teaching Experience

2025 **Python for Finance**, Lecturer *PUCP*
2022-2024 **Applied Economics**, Lecturer *PUCP*
2022 **General Economics**, Lecturer *UdeSA*
2021-2024 **Python Bootcamp**, Lecturer *PUCP*

Skills

Programming: Python, Java, Julia, R, Stata-Mata, C++, Matlab, Git, Linux, HTML

Frameworks: OPENAI-API, Cloud Computing Azure, AWS EC2, PyTorch, TensorFlow, Apache Spark, MySQL, PostgreSQL, Claude Code, AlphaEarth

References

1. Prof. Walter Sosa Escudero, Universidad de San Andres, Argentina. Email: wsosa@udesa.edu.ar, Phone: (54-11) 7078-0400.
2. Prof. Clement de Chaisemartin, Department of Economics, Sciences Po University, France. Email: clement.dechaisemartin@sciencespo.fr.
3. Associate Prof. Pedro Sant'Anna , Faculty of Business Administration, University of Emory, USA. Email: pedro.santanna@emory.edu, Phone: +1 615-480-8599.
4. Associate Prof. Saad Gulzar, Department of Political Science, University of Notre Dame, USA. Email: sgulzar@nd.edu.