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EDUCATION

Master of Arts <i>Policy Economics</i> Williams College	2016 – 2017 USA
Master of Science <i>Applied Economics</i> Universidad Andina Simón Bolívar	2015 – 2016 Bolivia
Bachelor's Degree <i>Economics</i> Universidad Mayor de San Andrés	2006 – 2010 Bolivia
Postgraduate Diplomas:	
<i>Public Investment Projects</i> – Universidad Privada Boliviana	2015
<i>Impact Evaluation of Social Policies</i> – Universidad Católica Boliviana	2013
<i>Applied Economics</i> – Escuela Militar de Ingeniería	2012

WORK EXPERIENCE

Lead Specialist in Artificial Intelligence for Economic Research MINISTRY OF ECONOMY AND PUBLIC FINANCE	Feb. 2024 – June 2025 Bolivia
<ul style="list-style-type: none">Directed the design and execution of high-impact AI and data science initiatives, enabling evidence-based public policy and improved economic decision-making.Established a robust data governance framework, optimizing end-to-end data pipelines, business intelligence, and analytics across ministry operations.Developed and deployed predictive models and advanced analytics, enhancing the Ministry's ability to anticipate and respond to economic trends and shocks.	
Lead Researcher MINISTRY OF ECONOMY AND PUBLIC FINANCE	May 2021 – Feb. 2024 Bolivia
<ul style="list-style-type: none">Led research projects on socioeconomic trends and policy evaluation, utilizing advanced econometrics, machine learning, and big data analytics.Provided direct technical advice to senior leadership, including the Minister of Economy.Published peer-reviewed research articles in the Ministry's economic journal.	
Consultant, Economic Integration in Latin America Project DEVELOPMENT BANK OF LATIN AMERICA (CAF)	Apr. 2020 – Mar. 2021 Bolivia
<ul style="list-style-type: none">Assessed the economic impact of transport infrastructure in Bolivia, Ecuador, and Paraguay using econometric and remote sensing methodologies.	
Economist, Economic Modelling UNIDAD DE ANÁLISIS DE POLÍTICAS SOCIALES Y ECONÓMICAS (UDAPE)	Aug. 2017 – Feb. 2021 Bolivia
<ul style="list-style-type: none">Led modelling and analysis of macroeconomic and social policies, designing advanced statistical and econometric tools to support policy formulation.Coordinated multi-institutional research with international organizations (CAF, UNFPA), resulting in influential policy reports and publications.	
Consultant, Strengthening Economic Development Research DEVELOPMENT BANK OF LATIN AMERICA (CAF)	Feb. 2018 – Oct. 2018 Bolivia
<ul style="list-style-type: none">Applied spatial econometric techniques to evaluate local public investment effectiveness and its spillover effects on development outcomes.	

Researcher	Jan. 2015 – Aug. 2016
MINISTRY OF ECONOMY AND PUBLIC FINANCE	Bolivia
<ul style="list-style-type: none"> Conducted rigorous econometric analysis of public policy, delivering key technical inputs for evidence-based decision-making. Published peer-reviewed research articles in the Ministry's economic journal. 	
Economist, Real Sector	Apr. 2013 – Dec. 2014
UNIDAD DE ANÁLISIS DE POLÍTICAS SOCIALES Y ECONÓMICAS (UDAPE)	Bolivia
<ul style="list-style-type: none"> Analyzed sectoral data and produced empirical reports to inform national planning and real sector policy. 	
Economist, Fiscal Sector	Oct. 2012 – Dec. 2012
UNIDAD DE ANÁLISIS DE POLÍTICAS SOCIALES Y ECONÓMICAS (UDAPE)	Bolivia
<ul style="list-style-type: none"> Analyzed fiscal sector data and produced reports supporting fiscal policy development and implementation. 	
Technical Assistant, Fiscal Sector	Sept. 2011 – Sept. 2012
UNIDAD DE ANÁLISIS DE POLÍTICAS SOCIALES Y ECONÓMICAS (UDAPE)	Bolivia
<ul style="list-style-type: none"> Managed sectoral databases and generated statistical analyses to support fiscal policy formulation. 	

PEER-REVIEWED JOURNAL ARTICLES

- Bolivar, O. (2025). **High-frequency Inflation Forecasting: A Two-step Machine Learning Methodology**. *Latin American Journal of Central Banking*, In Press, Corrected Proof, 100172.
- Bolivar, O. (2024). **GDP Nowcasting: A Machine Learning and Remote Sensing Data-based Approach for Bolivia**. *Latin American Journal of Central Banking*, 5(3), 100126.
- Bolivar, O. & Huanto, C. (2023). **Geopolitical Risk Shocks: Macroeconomic Effects in Bolivia, Chile, and Peru**. *Cuadernos de Investigación Económica Boliviana*, 6(2): 62-83.
- Bolivar, O., Huanto, C. & Teran, R. (2023). **Inflation Expectations: Dynamics and Effects for South America**. *Cuadernos de Investigación Económica Boliviana*, 6(1): 3-24.
- Bolivar, O. (2022). **Fiscal Multipliers: Empirical Evidence for a Cost-Effective Allocation of Public Investment**. *Cuadernos de Investigación Económica Boliviana*, 5(2): 1-28.
- Bolivar, O. (2021). **Boyanza Tributaria: Relación con la sostenibilidad fiscal y estabilizadores automáticos**. *Cuadernos de Investigación Económica Boliviana*, 4(2): 53-95.
- Bolivar, O. (2016). **Bolivianization (De-dollarization) and Effectiveness of the Monetary Policy**. *Cuadernos de Investigación Económica Boliviana*, 1(2): 1-40.
- Bolivar, O. & D. Ugarte (2015). **Domestic Demand as Engine of the Economic Growth in Bolivia**. *Cuadernos de Investigación Económica Boliviana*, 1(1): 1-27.
- Ugarte, D. & Bolivar, O. (2015). **The Effect of Income Redistribution on Poverty Reduction of Bolivia**. *Cuadernos de Investigación Económica Boliviana*, 1(1): 1-25.
- Ugarte, D. & Bolivar, O. (2015). **La Relación Precio del Petróleo y Crecimiento Económico en Bolivia: El Rol de la Política Económica**. *Revista de Análisis del Banco Central de Bolivia*, 22(1): 9-40.

BOOK CHAPTERS

- Bolivar, O. & Mendez, C. (2025). **Predicting community-level poverty in Bolivia: Insights from satellite imagery, census data, and spatial modeling**. *Nagoya University (Ed.), Revisiting the Poverty-Growth-Inequality Triangle in the Post-Pandemic Era (in progress)*. Japan: Routledge – Taylor & Francis Group.
- Bolivar, O. (2020). **Evaluación de impacto de la infraestructura vial en el crecimiento económico: Una aproximación con base en información satelital de luminosidad para Bolivia**. CAF-UDAPE, Osmar Bolívar (Ed.), *Evaluación de impacto de la infraestructura vial en Bolivia* (pp. 11-70). La Paz, Bolivia.
- Bolivar, O. & Ugarte, D. (2020). **Evaluación de impacto de la infraestructura vial sobre las condiciones socioeconómicas de la población**. CAF-UDAPE, Osmar Bolívar (Ed.), *Evaluación de impacto de la infraestructura vial en Bolivia* (pp. 71-117). La Paz, Bolivia.

Ugarte, D. & Bolivar, O. (2018). **Descentralización en Bolivia: Eficacia y Externalidades**. CAF-INESAD-ABCE & Beatriz Muriel (Ed.), *Investigaciones para el Desarrollo Económico de Bolivia* (pp. 113-168). La Paz, Bolivia.

PROCEEDINGS / WORKING PAPERS

Bolivar, O. & Huanto, C. (2025). **Sentiment, Cryptocurrency and Inflation: A Transmission Chanel in Bolivia**. Available at SSRN.

Bolivar, O. (2024). **Weekly Inflation Forecasting: A Two-Step Machine Learning Methodology**. Available at SSRN.

Bolivar, O. & Huanto, C. (2024). **Tensiones Geopolíticas: Efectos Macroeconómicos en Bolivia, Chile y Perú**. *Proceeding Paper - Call for Papers: 2024 Meeting of Economists of Bolivia*, Central Bank of Bolivia.

Bolivar, O. (2023). **Evolución de la pobreza en las comunidades de Bolivia entre 2012 y 2022: Un enfoque de machine learning y teledetección**. MPRA Paper from University Library of Munich.

Bolivar, O. (2022). **Dinámica Inflacionaria, Crecimiento Económico y Empleo en los contextos de pandemia y pospandemia para América del Sur**. *Proceeding Paper - First Place in the Call for Papers: 2022 Meeting of Economists of Bolivia*, Central Bank of Bolivia.

Bolivar, O. (2022). **Roads illuminate development: Using nightlight luminosity to assess the impact of transport infrastructure**. *Research Department Working Papers 1910*, CAF - Development Bank of Latin America.

Bolivar, O. (2017). **Desdolarización en Bolivia: Interacción con la Política Monetaria y el Tipo de Cambio**. *Proceeding Paper - Call for Papers: 2017 Meeting of Economists of Bolivia*, Central Bank of Bolivia.

HONORS AND AWARDS

First Place, 2023 Central Bank Award, Center for Latin American Monetary Studies (CEMLA).
For the research: "GDP Nowcasting: A Machine Learning and Remote Sensing Data-Based Approach for Bolivia"

First Place, 2022 Meeting of Economists of Bolivia, Central Bank of Bolivia.
For the research: "Dinámica Inflacionaria, Crecimiento Económico y Empleo en los Contextos de Pandemia y Pospandemia para América del Sur"

Finalist & Funding, 2020 Research Proposal Call, Development Bank of Latin America (CAF).
For the project: "Roads Illuminate Development: Using Nightlight Luminosity to Assess the Impact of Transport Infrastructure"

Winner & Funding, 2018 Research Proposal Call, Development Bank of Latin America (CAF).
For the project: "Descentralización en Bolivia: Eficacia y Externalidades"

First Place, 2015 Meeting of Economists of Bolivia, Central Bank of Bolivia.
For the research: "La Relación Precio del Petróleo y Crecimiento Económico en Bolivia: El Rol de la Política Económica"

TEACHING EXPERIENCE

Fiscal Sector - Master in Applied Economics and Public Policy	2024 - Current
Universidad Andina Simón Bolívar	Bolivia
Econometrics - Time series	2020
Universidad Privada Boliviana	Bolivia

CERTIFICATIONS AND COURSES

Certificate Program in Applied Generative AI — Johns Hopkins University	Ongoing
Deep Learning Specialization — DeepLearning.AI	2024
Machine Learning Specialization — DeepLearning.AI & Stanford University	2023
Multidisciplinary Program in Data, Programming, and AI — Buenos Aires University	2022

Training Course on Space Technology for Bolivia — Wuhan Research Institute of Posts and Telecommunications (China)	2022
R and GIS (Programming in R for Geographic Information Systems) — MappingGIS, Spain	2020
Remote Sensing in QGIS (Satellite Imagery Processing) — MappingGIS, Spain	2019
Dynamic Stochastic General Equilibrium Models — International Monetary Fund	2018
Impact Evaluation of Social Policies — Abdul Latif Jameel Poverty Action Lab (J-PAL)	2014

SKILLS

Languages: Spanish (Native), English

Programming/Software: Python, R, QGIS, STATA, MATLAB, E-views

Document Creation: Microsoft Office, LaTeX, Markdown