
JOSÉ BAYOÁN SANTIAGO CALDERÓN

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Education

2019	PhD Economics	Claremont Graduate University
2015	MA Economics	Claremont Graduate University
2014	BA Economics	Southwestern University

Appointments and Employment

Research Economist

[Analysis & Research Group](#)

National Economic Accounts Directorate 2021 – Present
Bureau of Economic Analysis

Working on topics related to the digital economy and measuring intangible assets (e.g., open-source software, data).

Postdoctoral Research Associate

[Social & Decision Analytics Division](#)

Biocomplexity Institute & Initiative 2019 – 2021
University of Virginia

Worked on multiple projects with government partners including:

- National Center for Science and Engineering Statistics ([NCSES](#))
 - Measuring the Scope and Impact of Open Source Software
 - [Skilled Technical Workforce](#)
- Defense Advanced Research Projects Agency (DARPA)
 - Computational Simulation of Online Social Behavior ([SocialSim](#)) – [Summary](#)
- Arlington County Police Department ([ACPD](#))
 - Evaluation of the Arlington Restaurant Initiative

Assisted the infrastructure team on helping the team best use UVA computing resources (e.g., high-performance computing) and best practices (e.g., version control).

Served as project lead and instructor for the Data Science for the Public Good Young Scholars Program ([DSPG](#)).

Statistics Consultant and Software Developer

[Pumas-AI](#) 2018 – 2020

Pumas is a Julia-based platform for pharmaceutical modeling and simulation. I worked on the development of components for the software and in the consulting services branch for statistical analysis.

Data Scientist and Software Developer

Residential Energy and Water Intelligence (Res-Intel)

2016 – 2018

Conducted a [program evaluation](#) of the California Advanced Home Program (CAHP) commissioned by Southern California Edison and developed the module for [residential benchmarking](#).

Peer-Reviewed Publications

- Mengchen Sam Yong, Lavínia Paganini, Huilian Sophie Qiu, and José Bayoán Santiago Calderón. 2021. “The Diversity-Innovation Paradox in Open-Source Software.” Pre-print, *MSR '21: Proceedings of the 18th International Conference on Mining Software Repositories* (May 19, 2021). DOI: [10.5281/ZENODO.4628556](https://doi.org/10.5281/ZENODO.4628556)
- José Bayoán Santiago Calderón. 2020a. “Econometrics.jl.” *Proceedings of the JuliaCon Conferences* 1 (1): 38. DOI: [10.21105/jcon.00038](https://doi.org/10.21105/jcon.00038)
- Miloslava Plachkinova and José Bayoán Santiago Calderón. 2016. “Adopting Healthcare Information Technology in Puerto Rico.” In *2016 Americas Conference on Information Systems: Spanish, Portuguese, and Latin America (LACAIS Chapter)*. San Diego, CA, August 11, 2016. <https://bit.ly/2PZiBk0>

Dissertation

- José Bayoán Santiago Calderón. 2019. “On Cluster Robust Models.” PhD diss., Claremont Graduate University. DOI: [10.5642/cguetd/132](https://doi.org/10.5642/cguetd/132)

Working Papers

- Christopher Vincent Rackauckas, Yingbo Ma, Andreas Noack, Vaibhav Dixit, Patrick Mogensen, Simon Byrne, Shubham Maddhashiya, José Bayoán Santiago Calderón, Joakim Nyberg, Joga Gobburu, and Vijay Ivaturi. 2020. *Accelerated Predictive Healthcare Analytics with Pumas, A High Performance Pharmaceutical Modeling and Simulation Platform*. Preprint. Pharmacology and Toxicology. DOI: [10.1101/2020.11.28.402297](https://doi.org/10.1101/2020.11.28.402297)

Presentations

- Carol Ann Robbins, Korkmaz Gizem, Ledia Guci, José Bayoán Santiago Calderón, and Brandon Lee Kramer. 2021. *A First Look at Open Source Software Investment in the United States and in Other Countries, 2009-2019*. International Association for Research in Income and Wealth / Economic Statistics Centre of Excellence Conference on Measuring Intangible Assets and their Contributions to Growth. Plenary Session. London, UK, November 11, 2021. <http://iariw.org/Program-IARIW-ESCoE-2021>

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- Brandon Lee Kramer, Korkmaz Gizem, José Bayoán Santiago Calderón, and Carol Ann Robbins. 2021. *A Longitudinal Analysis of International Collaboration on GitHub*. 3rd North American Social Networks Conference (NASN). Virtual, January 25, 2021. <https://bit.ly/3ea9ZyX>
- José Bayoán Santiago Calderón. 2020b. *Using Julia for Dissemination of Information About the General Election in Puerto Rico*. Government Advances in Statistical Programming (GASP!) Workshop. Virtual - Zoom, November 6, 2020. <https://bit.ly/3e4Gxu1>
- José Bayoán Santiago Calderón, Brandon Lee Kramer, Gizem Korkmaz, Carol Ann Robbins, Aaron Schroeder, and Keller Sallie. 2020. *Measuring the Cost and Impact of Open Source Software Innovation on GitHub*. Federal Committee on Statistical Methodology (FCSM) Computational Statistics and the Production of Official Statistics (CSPOS) Webinar on Blended Data. Washington, DC, May 1, 2020. <https://youtu.be/46onb1YG33k>
- Brandon Lee Kramer, Daniel Bullock, Morgan Klutzke, Crystal Zang, José Bayoán Santiago Calderón, and Gizem Korkmaz. 2020. *2020 DSPG Open Source Software Project*. Data Science for the Public Good Program Symposium. Virtual, August 7, 2020. <https://dspg2020oss.netlify.app>
- Carol Ann Robbins, Gizem Korkmaz, José Bayoán Santiago Calderón, Daniel Chen, Aaron Schroeder, Claire Kelling, Stephanie S. Shipp, and Sallie Keller. 2019. *Open Source Software as Intangible Capital: Measuring the Cost and Impact of Free Digital Tools*. Government Advances in Statistical Programming (GASP!) Workshop. Washington, DC, September 23, 2019. <https://youtu.be/xNQr9kCDJvo?t=2843>
- Carol Ann Robbins, Gizem Korkmaz, José Bayoán Santiago Calderón, Claire Kelling, Stephanie S Shipp, and Sallie Keller. 2018. “The Scope and Impact of Open Source Software: A Framework for Analysis and Preliminary Cost Estimates.” In *35th International Association for Research on Income and Wealth (IARIW) General Conference*, 2A5. <https://bit.ly/3tpeUSP>
- José Bayoán Santiago Calderón, Cong Cong, Calvin Isch, Eliza Tobin, Brandon Kramer, Aaron Schroeder, and Gizem Korkmaz. 2019. *Measuring the Universe of Open Source Software*. Data Science for the Public Good Program Symposium. Arlington, VA, August 9, 2019. <https://bit.ly/2y7ryyD>
- José Bayoán Santiago Calderón, Kateryna Savchyn, Victoria Halewicz, Jessica Keast, Aaron David Schroeder, and Gizem Korkmaz. 2019. *Economic And Social Impact Of Arlington Restaurant Initiative*. Data Science for the Public Good Program Symposium. Arlington, VA, August 9, 2019. <https://bit.ly/3bDVjWh>
- Carol Ann Robbins, Gizem Korkmaz, José Bayoán Santiago Calderón, Claire Kelling, Stephanie Shipp, and Sallie Keller. 2018. “Open Source Software as Intangible Capital: Measuring the Cost and Impact of Free Digital Tools.” In *The Sixth IMF Statistical Forum: Measuring Economic Welfare in the Digital Age: What and How?*, III1. International Monetary Fund (IMF). <https://bit.ly/3dkQcNP>