# Lucas da Cunha Godoy

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2017-2019

## **Education**

Universidade Federal do Rio Grande do Sul PORTO ALEGRE, BRAZIL 2011-2016

**Bachelor degree in Statistics** 

Introduction to geostatistical modeling for counting data: Parameters estimation with different MCMC algorithms

Universidade Federal de Minas Gerais Belo Horizonte, Brazil

**Master in Statistics** 

Testing Spatial Association Between Two Types Polygons

Advisor: Renato Assunção

University of Connecticut STORRS, CT

M.Sc. in Statistics 2019-2022 Ph.D. in Statistics (GPA: 3.640) 2019-2024

Hausdorff-Gaussian Process with Spatial and Spatiotemporal Applications

Advisor: Jun Yan

#### **Awards**

ENVR American Statistical Association–Student Paper Competition PORTLAND, OR

Honorable mention.

The EnviBayes workshop on complex environmental data, CSU FORT COLLINS, CO Travel Award. 2023

Graduate School - University of Connecticut STORRS, CT

Summer Doctoral Dissertation Fellowship. 2023

Department of Statistics – University of Connecticut STORRS, CT

Teaching Award. 2021-2022

The 2022 ISBA World Meeting Montreal, CA

Jun '22 Travel Award.

The Graduate School – University of Connecticut STORRS, CT

Conference Participation Award. Jun '22

1<sup>st</sup> Shiny Contest - RStudio United States

**Honorable Mention** Apr '19

Voronoys-Understanding voters' profile in Brazilian elections.

1<sup>st</sup> Conference on Statistics and Data Science Brazil

Best Paper Award on Statistics and Data Science

Voronoy Data Linkage: Extracting Data from Polygons to Points.

Center for Politics and Economics in the Public Sector Studies (CEPESP)-FGV

Brazil 1<sup>st</sup> CEPESP Data Challenge: Deciphering Brazil Elections Dec '17

The challenge is to find solutions for visualization, search engines, graphic arts and any other tools that facilitate the understanding of the electoral process in Brazil. Always with free and open source software.

## **Professional Experience**

EEB-University of California Santa Cruz

Postdoctoral Researcher.

Analyses of range shifts in species distributions.

SANTA CRUZ, CA Jun '24-present

Nov 18

Statistical Consulting Services-University of Connecticut

Graduate assistant.

Storrs, CT Aug '23–May '24

Walk-in statistical consulting.

High Performance Computing-University of Connecticut

STORRS, CT

Graduate assistant.

Aug '22-May '23

System administration, development and maintenance of apptainer containers to assure reproducibility and compatibility between newer operating systems and old software. Support to the users of the cluster

Department of Statistics-University of Connecticut

STORRS, CT

Statistics Cluster Admin.

Iun '21 – present

Management of the R packages and system requirements on the Cluster. Development and maintenance of singularity containers to assure analyses reproducibility.

Biostatistics Center-University of Connecticut Health Center

FARMINGTON, CT

**Graduate Assistant** 

Sep '20-Dec '23

Statistical consulting for UConn Health Center researchers.

Agibank

Porto Alegre, Brazil

Data Scientist Dez '18–Jun '19

Development of predictive models for debt collection and dashboards for monitoring their performance.

Grupo Conectt

Porto Alegre, Brazil

**Digital Intelligence Analyst** 

Sep '16-Mar '17

Development of monthly interactive reports based on web data. Predictive modeling of leads more likely to become clients.

Universidade Federal do Rio Grande do Sul

Porto Alegre, Brazil

**Undergraduate Research Assistant (AMBES project-Petrobras)** 

Apr 15–Dec15

Geostatistical modeling to predict and understand the impact of oil platforms' physical chemical characteristics of the ocean. Supervisor: Fernando Pulgati.

Undergraduate Research Assistant

May 11–Dec 14

Investigating social inequalities and their impact on public health in Brazil under. Supervisor: Professor Sergio Luiz Bassanesi.

Instituto Brasileiro de Geografia e Estatística

**Supervisor Agent-Census** 

Mar 10-Nov 10

Organization, supervision, and monitoring of data collection during the 2010 Census in Brazil.

**Teaching Experience** 

University of Connecticut

STORRS, CT

Principal Instructor

Spring 2021–Spring 2022

STAT 3445–Introduction to Mathematical Statistics II.

**Teaching Assistant** 

Fall 2019-Fall 2020

STAT 3445-Introduction to Mathematical Statistics II.

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Fall 2019

STAT 2215Q-Introduction to Statistics II.

**Teaching Assistant** 

Spring 2020

STAT 1000Q-Introduction to Statistics I.

Uniritter

Porto Alegre, Brazil

Lecturer

Spring 2019

Data analysis using R.

## Peer-Reviewed Articles-Methodology

Michelin, L., **Godoy**, **L. d. C.**, Ramos, H. S., & Prates, M. O. (2025). Fast mixture spatial regression: A mixture in the geographical and feature space applied to predict porosity in the post-salt. *Spatial Statistics*, *65*, 100873. https://doi.org/10.1016/j.spasta.2024.100873

**Godoy**, **L. d. C.**, Assunção, R. M., & Butler, K. A. (2022). Testing the spatial association of different types of polygons. *Spatial Statistics*, *51*, 100695. https://doi.org/10.1016/j.spasta.2022.100695

Prates, M. O., Azevedo, D. R. M., **Godoy**, L. d. C., & Bandyopadhyay, D. (2021). Can gaussian markov random fields handle spatial confounding? *Journal of the Indian Statistical Association*, 59(2), 197–220.

## Peer-Reviewed Articles-Applications

- Abu-Arqub, S., Hariharan, A., Banankhah, S., **Godoy**, **L. d. C.**, Liu, P., Kuo, C., & Uribe, F. (0). Accuracy of full arch scans using the itero element 2® intra-oral scanner: A clinical study [PMID: 39135489]. *Journal of Orthodontics*, *0*(0), 0–0. https://doi.org/10.1177/14653125241268755
- Frank, S., Ibrahim, B., Feng, R., Bidra, A., Lafreniere, D., Kuo, C., **Godoy**, **L. d. C.**, & Falcone, T. E. (n.d.). Tolerability of nasal and oral povidone-iodine antisepsis for in-office procedures. *Clinical Otolaryngology*, 48(4), 696–699. https://doi.org/10.1111/coa.14045
- Moriarty, K. L., Manfredi, K., Carrel, P., Kryzanski, E., Schwartz, D. A., **Godoy**, **L. d. C.**, Kuo, C.-L., & Shields, A. (2025). Findings of reduced head circumference with COVID-19 infection in the third trimester: A retrospective cohort study. *Biomedicines*, *13*(4). https://doi.org/10.3390/biomedicines13040832
- Abu-Arqub, S., Al-Moghrabi, D., Kuo, C., **Godoy**, **L. d. C.**, & Uribe, F. (2024). Perceptions and utilization of tele-orthodontics: A survey of the members of the american association of orthodontists. *Progress in Orthodontics*, 25(1), 16. https://doi.org/10.1186/s40510-024-00516-4
- Abu-Arqub, S., Greene, R., Greene, S., Laing, K., Kuo, C., **Godoy**, **L. d. C.**, & Uribe, F. (2024). Retrospective evaluation of the success rate and factors associated with the stability of alveolar ridge orthodontic miniscrews: Pilot study. *Journal of the World Federation of Orthodontists*, 13(4), 181–188. https://doi.org/https://doi.org/10.1016/j.ejwf.2024.02.001
- Andreyeva, T., Moore, T. E., **Godoy**, **L. d. C.**, & Kenney, E. L. (2024). Federal nutrition assistance for young children: Underutilized and unequally accessed. *American Journal of Preventive Medicine*, 66(1), 18–26. https://doi.org/https://doi.org/10.1016/j.amepre.2023.09.008
- Fryc, G. A., **Godoy**, L. d. C., Kuo, C., & Lurie, A. G. (2024). Prevalence of likely retro-odontoid pseudotumor in patients receiving dental cbct examinations. *Oral Surgery, Oral Medicine, Oral Pathology and Oral Radiology*, 137(3), 301–309. https://doi.org/10.1016/j.oooo.2023.11.005
- Irsheid, R., **Godoy**, **L. D. C.**, Kuo, C., Metz, J., Dolce, C., & Abu-Arqub, S. (2024). Comparative assessment of the clinical outcomes of clear aligners compared to fixed appliance in class ii malocclusion. *Clinical Oral Investigations*, 28(8), 1–10. https://doi.org/10.1186/s12903-018-0695-z
- Abu-Arqub, S., Ahmida, A., **Godoy**, **L. d. C.**, Kuo, C., Upadhyay, M., & Yadav, S. (2023). Insight into clear aligner therapy protocols and preferences among members of the american association of orthodontists in the united states and canada. *The Angle Orthodontist*, 93(4), 417–428. https://doi.org/10.2319/101022-694.1
- Abu-Arqub, S., Bashir, R., Obeng, K., **Godoy**, **L. d. C.**, Kuo, C., Upadhyay, M., & Yadav, S. (2023). Survival and failure rate of lower lingual bonded retainers: A retrospective cohort evaluation. *Orthodontics & Craniofacial Research*, 26(2), 256–264. https://doi.org/10.1111/ocr.12608
- Abu-Arqub, S., Greene, R., Greene, S., Laing, K., Kuo, C., **Godoy**, **L. d. C.**, & Uribe, F. (2023). Ridge mini-implants, a versatile biomechanical anchorage device whose success is significantly enhanced by splinting: A clinical report. *Progress in Orthodontics*, 24(1), 27. https://doi.org/10.1186/s40510-023-00480-5
- de Jesus, M., Maheshwary, A., Kumar, M., **Godoy**, **L. d. C.**, Kuo, C., & Grover, P. (2023). Association of electrocardiographic and echocardiographic variables with neurological outcomes after ischemic stroke. *American Heart Journal Plus: Cardiology Research and Practice*, *34*, 100313. https://doi.org/10.1016/j.ahjo. 2023.100313
- Duong, C., Zhu, Q., Aseltine Jr, R. H., Kuo, C., **Godoy**, **L. d. C.**, & Kaufman, B. (2023). A survey on cone-beam computed tomography usage among endodontists in the united states. *Journal of Endodontics*, 49(11), 1559–1564. https://doi.org/10.1016/j.joen.2023.08.020
- Harandi, M. T., Abu-Arqub, S., Warren, E., Kuo, C., **Godoy**, **L. d. C.**, Mehta, S., Feldman, J., Upadhyay, M., & Yadav, S. (2023). Assessment of clear aligner accuracy of 2 clear aligners systems. *American Journal of Orthodontics and Dentofacial Orthopedics*, 164(6), 793–804. https://doi.org/https://doi.org/10.1016/j.ajodo. 2023.05.028
- Kuo, C., Liu, R., **Godoy**, **L. d. C.**, Pilling, L. C., Fortinsky, R. H., & Brugge, D. (2023). Association between residential exposure to air pollution and incident coronary heart disease is not mediated by leukocyte telomere length: A uk biobank study. *Toxics*, *11*(6). https://doi.org/10.3390/toxics11060489
- Leonard, J. F., Taxel, P., Kuo, C., **Godoy**, **L. d. C.**, & Freilich, M. (2023). Dental implant and bone augmentation treatment in bone-compromised patients: Oral health-related quality of life outcomes. *The Journal of Prosthetic Dentistry*. https://doi.org/10.1016/j.prosdent.2023.01.011
- Turshudzhyan, A., **Godoy**, **L. d. C.**, Kuo, C., & Wu, G. Y. (2023). Alpha feto-protein expression trends for screening early hepatocellular carcinoma. *Gene Expression*, 22(2), 109–114. https://doi.org/10.14218/GE. 2023.00001
- Abu-Arqub, S., Banankhah, S., Sharma, R., **Godoy**, **L. d. C.**, Kuo, C., Ahmed, M., Alfardan, M., & Uribe, F. (2022). Association between initial complexity, frequency of refinements, treatment duration, and outcome in Invisalign orthodontic treatment. *American Journal of Orthodontics and Dentofacial Orthopedics*. https://doi.org/10.1016/j.ajodo.2022.06.017

- Hariharan, A., Abu-Arqub, S., Gandhi, V., **Godoy**, **L. d. C.**, Kuo, C., & Uribe, F. (2022). Evaluation of interproximal reduction in individual teeth, and full arch assessment in clear aligner therapy: Digital planning versus 3d model analysis after reduction. *Progress in Orthodontics*, 23(1), 1–10. https://doi.org/10.1186/s40510-022-00403-w
- Kumar, M., Patil, S., **Godoy**, **L. d. C.**, Kuo, C., Swede, H., Kuchel, G. A., & Chen, K. (2022). Demand ischemia as a predictor of mortality in older patients with delirium. *Frontiers in Cardiovascular Medicine*, 9. https://doi.org/10.3389/fcvm.2022.917252
- Arqub-Abu, S., Voldman, R., Ahmida, A., Kuo, C., **Godoy**, **L. d. C.**, Nasrawi, Y., Al-Khateeb, S. N., & Uribe, F. (2021). Patients' perceptions of orthodontic treatment experiences during COVID-19: A cross-sectional study. *Progress in Orthodontics*, 22(1), 1–12. https://doi.org/10.1186/s40510-021-00363-7
- Huynh, C., **Godoy**, **L. d. C.**, Kuo, C., Smeds, M., & Amankwah, K. S. (2021). Examining the development of operative autonomy in vascular surgery training and when trainees and program directors agree and disagree. *Annals of Vascular Surgery*, 74, 1–10. https://doi.org/10.1016/j.avsg.2021.01.121
- Lin, G., Murase, J. E., Murrell, D. F., **Godoy**, **L. d. C.**, & Grant-Kels, J. M. (2021). The impact of gender in mentor-mentee success: Results from the women's dermatologic society mentorship survey. *International Journal of Women's Dermatology*, 7(4), 398–402. https://doi.org/10.1016/j.ijwd.2021.04.010

## **Pre-Print Articles and Software**

- **Godoy**, **L. d. C.**, Prates, M., & Quintana, F. (2025). A note on defining positive definite functions. https://arxiv.org/abs/2502.15146
- Hernández, G. G., Seemann, J. R., **Godoy**, **L. d. C.**, Slot, M., & García-Robledo, C. (2025). Heat tolerance of tropical herbaceous plants increases with elevation. https://doi.org/10.1101/2025.03.12.642681
- **Godoy**, **L. d. C.** (2024a). *sapo: Spatial association of different types of polygon* [R package version 0.8.0]. https://CRAN.R-project.org/package=sapo
- **Godoy**, L. d. C. (2024b). *smile: Spatial misalignment: Interpolation, linkage, and estimation* [R package version 1.0.5]. https://doi.org/10.32614/CRAN.package.smile

#### Articles under review

- Fredston, A., Ovando, D., da **Cunha Godoy**, **L.**, Kong, J., Muffley, B., Thorson, J. T., & Pinsky, M. (2025). Dynamic range models improve the near-term forecast for a marine species on the move. *Ecology Letters*. https://doi.org/10.32942/X24D00
- Pandya, S. S., da **Cunha Godoy**, **L.**, Alexander, C. S., Schneider, D., & Harknett, K. (2025). Using worker surveys to detect labor standards non-compliance. *Statistics and Public Policy*.
- Sieger, M., Goldsborough, E. J., Nichols, C., **Godoy**, **L. d. C.**, Moore, T. E., Chen, S., Terplan, M., Griffin, B. A., & Patrick, S. W. (2025). Effect of statewide prenatal substance exposure policy on infant maltreatment report rates. *Health Affairs*.
- **Godoy**, **L. d. C.**, Prates, M. O., & Yan, J. (2024a). Statistical inferences and predictions for areal data and spatial data fusion with hausdorff–gaussian processes. *Bayesian Analysis*. https://doi.org/10.48550/arXiv.2208. 07900
- **Godoy**, **L. d. C.**, Prates, M. O., & Yan, J. (2024b). Voronoi linkage between mismatching voting stations and census tracts in analyzing the 2018 brazilian presidential election data. *New England Journal of Statistics in Data Science*.

## Refereeing

- Biostatistics
- International Statistical Review
- Journal of the Royal Statistical Society: Series A
- Journal of Data Science

#### **Invited Talks**

Department of Epidemiology and Biostatistics, University of California San FranciscoSan Francisco, CA

Statistical Inferences and Predictions for Areal Data and Spatial Data Fusion with Hausdorff-Gaussian Processes

Mar '25

Department of Statistcs, Universidade Federal do Rio Grande do Sul PORTO ALEGRE, BR Statistical Inferences and Predictions for Areal Data and Spatial Data Fusion with Hausdorff-Gaussian **Processes** Department of Statistcs, University of California Santa Cruz Santa Cruz, CA Statistical Inferences and Predictions for Areal Data and Spatial Data Fusion with Hausdorff-Gaussian **Processes** Oct '24 Stockholm Resilience Centre, University of Stockholm STOCKHOLM, SE Process-based species distribution models for improving predictive performance of climate-driven range shifts Sep '24 Joint talk with Dr. Mark Morales. UConn Sports Analytics Symposium (UCSAS) 2021 STORRS, CT Web Scraping for Sports Data with R Oct '21 1<sup>ST</sup> DATATHON - UFRGS PORTO ALEGRE, BR Web Scraping, Web Services & APIs. Nov '18 GRADUATE STUDENTS' SEMINARS - UFMG BELO HORIZONTE, BR Analyzing Brazilian public data Aug 18 **Contributed Talks and Posters** Joint Statistical Meeting 2024 PORTLAND, OR From Point to Polygon: A Unified Framework for Modeling Spatial Dependence Aug '24 Talk. The 37<sup>th</sup> New England Statistics Symposium STORRS, CT Beyond Traditional Disease Mapping: Hausdorff-Gaussian Process for Spatiotemporal Analysis of Tuberculosis Incidence May '24 Talk. The EnviBayes workshop on complex environmental data, CSU FORT COLLINS, CO Hausdorff-Gaussian process: Unifying spatial data analysis Sep '23 Poster. The 2022 ISBA World Meeting Montreal, CA An unified framework for point-level, areal, and mixed spatial data: The Hausdorff-Gaussian Process Iun '22 Talk. The 35<sup>th</sup> New England Statistics Symposium STORRS, CT Model-Based Voronoi linkage between point-referenced data and areal data in spatial analysis with application to the Brazilian election 2018 May '22 The 34<sup>th</sup> New England Statistics Symposium STORRS, CT Spatially misaligned data: An application to the 2018 Brazilian presidential election Oct '21 2<sup>nd</sup> UConn Sports Analytics Symposium (UCSAS) STORRS, CT Automatic team selection in a fantasy football (soccer) Game. Oct '20 Poster. 1<sup>st</sup> UConn Sports Analytics Symposium (UCSAS) STORRS, CT Bayesian hierarchical models applied to fantasy games. Oct '19 Poster. 1<sup>ST</sup> CONFERENCE ON STATISTICS AND DATA SCIENCE SALVADOR, BRAZIL

63TH MEETING FROM THE BRAZILIAN CHAPTER OF THE INTERNATIONAL BIOMETRIC SOCIETY (RBRAS)CURITIBA, BRAZIL

Voronoi Cells: Visualizing intramunicipality votes distribution Contributed Talk.

Voronoi Data Linkage: Extracting data from polygons to points.

Contributed Talk.

May '18

Nov '18

Godoy, page 6 of 6 April 28, 2025

 $\begin{array}{c} {\rm XIV~Brazilian~meeting~on~Bayesian~Statistics~(EBEB)} \\ {\rm ~A~Bayesian~mixture~model~to~fit~players~performance~in~fantasy~games} \end{array}$ 

Rio de Janeiro, Brazil *Mar '18*