

Allan Quadros

Coggin College of Business, University of North Florida, Jacksonville, FL

allan.quadros@unf.edu | (785) 576-3130 | <https://allanvc.github.io>

EDUCATION

Ph.D. in Statistics 2021–2025
Kansas State University

B.Sc. in Statistics 2014–2018
University of Brasilia (UnB)
* Recipient of the ‘Outstanding Student Award’ (highest GPA: 4.96/5.00)

M.Sc. in Economic Development 2009–2012
State University of Campinas (Unicamp)

Licenciatura in Geography 2003–2008
State University of Campinas (Unicamp)

PROFESSIONAL EXPERIENCE

Instructor of Operations Management and Information Systems Aug 2025 – present
Department of Management, Coggin College of Business, University of North Florida
Teach primarily data and business analytics courses. Work focuses on computational statistics, Bayesian modeling, and data-driven applications in finance and business, helping students develop strong analytical and decision-making skills.
Address: 1 UNF Drive, Building 42, Office 1110, Jacksonville, FL, USA.

Research Assistant – Risk Modeling, NBAF/USDA Project May 2024 – May 2025
College of Business, Kansas State University
Developed and implemented the statistical methodology for predicting time-to-failure without prior failure data for the National Bio and Agro-Defense Facility (NBAF). This model enabled the adoption of a complete risk-based maintenance policy to support strategic decision-making and budget requests to the U.S. Congress. Funded by two USDA grants totaling \$271,385 under the “NBAF Life Cycle of Equipment” program (2023–2024).
Address: 1116 Mid-Campus Drive N., Manhattan, KS, USA.

Graduate Teaching Assistant Apr 2021 – May 2025
Department of Statistics, Kansas State University
Specialized in computational statistics, Bayesian hierarchical modeling, resampling methods, and survival analysis for financial and business applications. Instructor of undergraduate statistics courses; provided individualized academic support through tutoring and office hours; prepared, administered, and graded exams and assignments.
Address: 1116 Mid-Campus Drive N., Manhattan, KS, USA.

Lead Data Scientist (Technical Advisor, FCPE-102.3) Apr 2020 – Dec 2020
National Fund for Educational Development (FNDE), Ministry of Education, Brazil
Designated by the Ministry of Education to a senior commissioned position (Technical Advisor, FCPE-102.3) within the Presidency’s Strategic Management and Governance Office (AGEST), the unit responsible for corporate governance, institutional development, innovation, and the management of the agency’s strategic projects. Served as head of the data science team I had founded the year before, focusing exclusively on the technical leadership of Machine & Statistical Learning solutions and stepping away from the broader strategic-management duties. Led the team’s delivery of high-impact

analytical products, including the Malha Fina accountability and fraud-detection system and the propNLd enrollment-forecasting solution that informed the federal government's nationwide textbook procurement; defined performance metrics and analytical standards that enhanced decision-making and operational efficiency; ensured alignment of data science deliverables with the agency's strategic objectives; and championed data-driven decision-making across the organization.
Address: SBS, Quadra 2, Bloco F – Ed. FNDE – Brasília, DF, Brazil.

Strategic Management Advisor (Advisor, DAS 102.4)

Jan 2019 – Apr 2020

National Fund for Educational Development (FNDE), Ministry of Education, Brazil

Appointed by the Ministry of Education to a commissioned advisory position (Advisor, DAS 102.4) within the Presidency's Strategic Management and Governance Office (AGEST), where I was charged with creating the agency's first data science team. Assessed corporate-governance, institutional-development, and innovation initiatives; advised on the management of the organization's strategic projects; and established the team, methods, and analytical standards that introduced Machine & Statistical Learning into the agency's strategic decision-making.

Address: SBS, Quadra 2, Bloco F – Ed. FNDE – Brasília, DF, Brazil.

Data Scientist | Finance Specialist

May 2013 – Jan 2019

National Fund for Educational Development (FNDE), Ministry of Education, Brazil

Developed several data mining and statistical models using Python and R; built financial projection and forecasting models to support budgeting and resource-allocation decisions; implemented code to automate repetitive tasks and report generation; created FisFa, a financial accountability software that saved over US\$ 50 million for the Brazilian federal government between 2015 and 2018; built and maintained production-grade ML models using Docker; developed detailed technical documentation and led training sessions to ensure stakeholder proficiency.

Address: SBS, Quadra 2, Bloco F – Ed. FNDE – Brasília, DF, Brazil.

Lecturer in Economics

Jul 2010 – Apr 2013

University Center of Jaguariuna (UniFAJ), Brazil

Instructor of undergraduate and graduate courses in economics; provided individualized academic support to students through tutoring sessions and office hours; prepared, administered, and graded exams and assignments.

Address: Rua Amazonas, 504 – UniFAJ – Jaguariuna, SP, Brazil.

First Lieutenant

Feb 2003 – Jun 2009

Brazilian Army, Infantry Branch

Led a platoon of 30+ individuals in operational tasks; instructor of military courses; public relations officer for 2 years.

Address: Av. Soldado Passarinho S/N – Fazenda Chapadao – 28BIL – Campinas, SP, Brazil.

RESEARCH GRANTS

CCB Advancement Grant, University of North Florida

Mar 2026

\$12,000 in support of "Detecting False Positives in Cointegration Tests: A Bayesian Prior-Posterior Conflict Approach".

CCB Societal Impact Faculty Development Grant, University of North Florida

Jan 2026

\$4,000 in support of "Improving Chronic Disease Management: Spatiotemporal Patterns of Care Delivery Before and During the Pandemic".

PUBLICATIONS

Peer-Reviewed Articles

[1] Quadros, A., Higgins, M., & Silverstein, B. (2026). A Bayesian approach to generating distribution-based

signals in pairs trading. *Quantitative Finance*, 26(5), 777–797. <https://doi.org/10.1080/14697688.2026.2644357>

- [2] Souza, P., **Quadros, A.**, Dogan, H., Li, Y., Shi, Y. C., & Karkle, E. (2026). Exploring bread quality through the use of commercial bacterial and fungal xylanases: Effects on dough rheology, loaf volume, and arabinoxylan structure. *Journal of Food Science*, 91(2), e70940. <https://doi.org/10.1111/1750-3841.70940>
- [3] Cançado, A., Oliveira, G., **Quadros, A.**, & Duczmal, L. (2025). A tree-spatial scan statistic. *Environmental and Ecological Statistics*, 32, 953–978. <https://doi.org/10.1007/s10651-025-00670-w>
- [4] **Quadros, A.** (2024). mRpostman: An IMAP client for R. *Journal of Open Research Software*, 12(1), 4. <https://doi.org/10.5334/jors.480>
- [5] von Borries, G., & **Quadros, A.** (2022). ROC App: An application to understand ROC curves. *Brazilian Journal of Biometrics*, 40(2). <https://doi.org/10.28951/bjb.v40i2.566>
- [6] Beaklini, P., **Quadros, A.**, Avellar, M., Dantas, M., & Cançado, A. (2020). AGN dichotomy beyond radio loudness: A Gaussian mixture model analysis. *Monthly Notices of the Royal Astronomical Society*, 497(2), 1463–1474. <https://doi.org/10.1093/mnras/staa2072>

Manuscripts Under Review

- [1] **Quadros, A.**, Cançado, A. treeSS: tree-spatial scan statistic for cluster detection in R. Submitted to *Journal of Statistical Software*, July 2026.
- [2] Shang, D., **Quadros, A.**, & Williams, C. External care dependence for chronic disease management: Evidence from county-to-county patient flows. Submitted to *Journal of Rural Health*, July 2026.
- [3] **Quadros, A.**, Higgins, M., & Silverstein, B. Distribution-based algorithms for pairs trading: A block bootstrap approach. Submitted to *Quantitative Finance*, March 2026.

Working Papers & Preprints

- [1] Silverstein, B., & **Quadros, A.** (2026). Managing currency risk in volatile markets with Bayesian dynamic hedge ratios. Available at SSRN: <https://ssrn.com/abstract=7095818>
- [2] Silverstein, B., **Quadros, A.**, & Viehweger, N. (2026). Reset value and protection restoration in defined outcome overlays. Available at SSRN: <https://ssrn.com/abstract=7095878>

Manuscripts in Preparation

- [1] **Quadros, A.** A Bayesian sign-conflict diagnostic for filtering false positives in cointegration. Funded by the UNF/CCB Advancement Grant. Targeting *Journal of Business & Economic Statistics*.
- [2] **Quadros, A.**, Higgins, M., & Silverstein, B. Bayesian Hierarchical Prediction of Equipment Failure Risk in the Complete Absence of Historical Failure Data. Targeting *IEEE Transactions on Reliability*.
- [3] **Quadros, A.**, Shang, D., & Williams, C. Who counts as a telehealth patient? Exposure classification bias in claims-based continuity-of-care studies. Targeting *Health Care Management Science*.
- [4] **Quadros, A.** A complete IMAP4rev1 client for reproducible e-mail data analysis in R. Targeting *The R Journal*.
- [5] **Quadros, A.** Fast exact Euclidean minimum spanning trees via a hybrid-pruning dual-tree Borůvka. Targeting *INFORMS Journal on Computing (Software Tools)*.
- [6] **Quadros, A.** COBRA: A certificate-oriented Borůvka algorithm for exact Euclidean minimum spanning trees. Targeting *ACM Journal of Experimental Algorithmics*.

Books and Textbooks

- [1] **Quadros, A.** (2025). Introduction to Data Analysis with R and the Tidyverse. Online textbook used in Data Analytics and Applications of Business Analytics courses at UNF. <https://allanvc.github>

.io/book_IDART_en

- [2] **Quadros, A.** (2020). Introdução à Análise de Dados em R utilizando Tidyverse. https://allanvc.github.io/book_IADR-T
 - [3] **Quadros, A.** Who is Afraid of Math? (In preparation).
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CONFERENCE PRESENTATIONS

- [1] Silverstein, B. & **Quadros, A.** (presenter) (2026, November). Managing Currency Risk in Volatile Markets: A Bayesian Approach. Forthcoming, Southern Finance Association Annual Meeting 2026 (SFA 2026), Palm Springs, CA.
 - [2] **Quadros, A.** (presenter), Higgins, M., & Silverstein, B. (2026, June). Distribution-based algorithms for pairs trading: A block bootstrap approach. 9th Quantitative Finance and Risk Analysis Symposium 2026 (QFRA 2026), Zakynthos, Greece.
 - [3] Shang, D., **Quadros, A.** (presenter), & Williams, C. (2026, June). Improving chronic disease management: Spatiotemporal patterns of care delivery before and during the pandemic. TREO Forum at the 34th European Conference on Information Systems (ECIS 2026), Milan, Italy.
 - [4] **Quadros, A.** (presenter), Higgins, M., & Silverstein, B. (2025, July). A Bayesian approach to generating distribution-based signals in pairs trading. 2025 SIAM Conference on Financial Mathematics and Engineering (SIAM FM25), Miami, FL.
 - [5] **Quadros, A.** (presenter) (2011, July). Estruturas de governança na cadeia produtiva de cafés finos: cooperação horizontal e verticalização para apropriação das quase-rendas [Governance structures in the specialty coffee supply chain: Horizontal cooperation and vertical integration for quasi-rent appropriation]. 49th Congress of the Brazilian Society of Rural Economics, Administration and Sociology (SOBER 2011), Belo Horizonte, Brazil.
 - [6] **Quadros, A.**, & Prince Silva, F. (presenter) (2011, September). Uma abordagem evolucionista do papel da tecnologia na agricultura [An evolutionary approach to the role of technology in agriculture]. 19th Brazilian Congress of Economics (CBE 2011), Bonito, Brazil. (One of only 14 papers selected by the Scientific Committee.)
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SOFTWARE DEVELOPMENT

Open-Source R Packages

treeSS (2026) – Tree-Spatial Scan Statistic for Cluster Detection. Companion R package implementing the tree-spatial scan statistic methodology introduced in Cançado et al. (2025).

CRAN: <https://cran.r-project.org/package=treeSS>

GitHub: <https://github.com/allanvc/treeSS>

mRpostman (2019) – An IMAP client for R. Selected as one of the top 40 new CRAN packages of August 2019 by RStudio/Posit's R Views Blog.

CRAN: <https://cran.r-project.org/package=mRpostman>

GitHub: <https://github.com/allanvc/mRpostman>

Website: <https://allanvc.github.io/mRpostman>

emstreeR (2018) – Tools for Fast Computation and Visualization of Euclidean Minimum Spanning Trees.

CRAN: <https://cran.r-project.org/package=emstreeR>

GitHub: <https://github.com/allanvc/emstreeR>

onlineretail (2020) – Online retail dataset.

CRAN: <https://cran.r-project.org/package=onlineretail>

GitHub: <https://github.com/allanvc/onlineretail>

Proprietary Software

NBAF Equipment Failure Prediction (2025) – Software and statistical methodology developed to estimate the time-to-failure of large industrial equipment, supporting budget planning and strategic decision-making. Kansas State University / NBAF / USDA. Language: R.

Malha Fina (2020) – Financial accountability and fraud detection software. Ministry of Education / FNDE, Brazil. Language: Python.

proPNLD – Forecasting (2019) – Software and statistical methodology developed to accurately forecast student enrollment by grade and school across the entire Brazilian public educational system, facilitating the procurement of customized textbooks by the Brazilian federal government. Ministry of Education / FNDE, Brazil. Language: R.

FisFa – Fiscaliza Fatura (2016) – Financial accountability and contract management software credited with over US\$ 50 million in savings to the Brazilian federal government (2015–2018). Ministry of Education / FNDE, Brazil. Language: Python and R. Software registered with Brazil’s National Institute of Industrial Property (INPI), registration BR 51 2016 000212 3.

TEACHING

University of North Florida (Coggin College of Business)

ISM6404 – Applications of Business Analytics (MSBA)	Fall 2025, Spring 2026
CAP6768 – Data Analytics (MSBA)	Fall 2025, Spring 2026
MAN4583 – Project Management (Undergraduate)	Fall 2025, Spring 2026
MAN4550 – Introduction to Management Science (Undergraduate)	Summer 2026
ISM4210 – Information and Data Management (Undergraduate)	Spring 2026

Kansas State University (Department of Statistics)

STAT341 – Biometrics II (Instructor)	Spring 2024, 2025
STAT340 – Biometrics I (Instructor)	Spring 2023, Fall 2024
STAT325 – Introduction to Statistics (Instructor)	2021–2022
STAT703 – Introduction to Statistical Methods for the Sciences (TA)	Summer 2023, 2024
STAT351 – Business and Economic Statistics II (TA)	Fall 2023

Invited Lecturer (Brazil – multiple cohorts 2018–2021)

Inferential Statistics with Python – MBA, ENAP
Predictive Analysis – Machine Learning – MBA, FGV
Exploratory Data Analysis – MBA, FGV
Advanced Predictive Analysis – Deep Learning – MBA, FGV
Data Analysis with R (Introductory & Intermediate) – FNDE

University Center of Jaguariúna (UniFAJ, Brazil)

Macroeconomics (Economics I) – Undergraduate	2010–2013
Microeconomics (Economics II) – Undergraduate	2010–2013
International Trade – Undergraduate	2012–2013
Business Economics – MBA	2012–2013

AWARDS AND RECOGNITION

Midwestern Association of Graduate Schools' Excellence in Teaching Award Nominee Jan 2025
Nominated to represent Kansas State University in the MAGS Award for Excellence in Teaching in 2025.

Graduate Student Council (GSC) Award for Graduate Student Teaching Excellence Oct 2024
Awarded by the Graduate Student Council at Kansas State University in recognition of excellence in undergraduate-level teaching.

William L. Stamey Award for Excellence in Teaching Feb 2024
Awarded by the College of Arts and Sciences at Kansas State University in recognition of excellence in undergraduate-level teaching.

1st Place – 26th Public Sector Innovation Contest Dec 2022
The 'Malha Fina' project won the 'Innovation in Organizational Processes' category, awarded by the National School of Public Administration (Enap) – Brazil.

University of Brasilia's Honor and Merit Award Nominee May 2020
Nominated by the Statistics Department faculty for the University of Brasilia's Honor and Merit Award of 2020.

Standout Project in Contract Management – 4th ANGC Awards Sep 2018
The FisFa software won the 'Best Initiative of the Year in Contract Management', awarded by the National Association of Contract Managers (ANGC), São Paulo, Brazil.

Statistics Department's Outstanding Student Award Jul 2018
Awarded by the Department of Statistics at the University of Brasilia (UnB) to the student with the highest GPA (4.9641/5.0) upon completion of the undergraduate program.

1st Place – 4th Good Practices Contest Dec 2016
The FisFa software won the 'Internal Controls in Public Administration' category, awarded by the Ministry of Transparency and Comptroller-General of the Union (CGU), Brasilia, Brazil.

SERVICE

Reviewer, rOpenSci – R for Open Science Initiative Aug 2026 – present
<https://ropensci.org/>

Reviewer, Journal of Open Source Software (JOSS). Jun 2026 – present
<https://joss.theoj.org/>

Co-Organizer (With Pingying Zhang), Management Research Seminar Series, Department of Management, University of North Florida. Aug 2025 – present

PROFESSIONAL AFFILIATIONS

Member, American Statistical Association (ASA)

Member, Mu Sigma Rho – National Statistics Honor Society

Member, Association for Information Systems (AIS)