

ALLAN QUADROS

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EDUCATION

Kansas State University

Ph.D. in Statistics

Jan 18, 2021 - May 16, 2025

University of Brasilia - UnB

B.Sc. in Statistics

Aug 4, 2014 - Jul 17, 2018

Recipient of the “Outstanding Student” Award

State University of Campinas - Unicamp

1. **M.Sc. in Economic Development**

Mar 3, 2009 - Mar 16, 2012

2. **Licenciatura in Geography**

Feb 3, 2003 - Dec 10, 2008

WORK EXPERIENCE

Department of Management — University of North Florida

Instructor of Operations Management and Information Systems

Aug 04, 2025 - present

Tasks:

- Since August 2025, I have been an Instructor in Information Systems and Operations Management at the University of North Florida, where I teach primarily data and business analytics courses. My 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: Coggin College of Business 1 UNF Drive, Building 42, Office 1110, Jacksonville, Florida, USA

College of Business — Kansas State University

Risk Modeling Consultant for the NBAF/USDA Project

May 15, 2024 - Jul 20, 2025

Tasks:

- 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 the 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

Department of Statistics — Kansas State University

Graduate Teaching Assistant

Apr 26, 2021 - May 16, 2025

Tasks:

- Specialized in computational statistics, Bayesian hierarchical modeling, resampling methods, and survival analysis for financial and business applications; Instructor of undergraduate statistics courses, effectively communicating complex concepts to diverse audiences; Provided individualized academic support to students through tutoring sessions and office hours; Prepared, administered, and graded exams and assignments, ensuring comprehensive feedback.

Address: 1116 Mid-Campus Drive N., Manhattan, KS, USA

BX Analytics

Quantitative Researcher & Developer

Jun 04, 2022 - Jun 07, 2024

Tasks:

- Designed and deployed two statistical arbitrage methodologies and accompanying software solutions to optimize trading strategies and improve portfolio management at BX hedge fund.

Address: Cambui Corporate, Av. Cel. Silva Telles, 1002, Campinas, SP, Brazil

National Fund for Educational Development - FNDE

1. *Lead Data Scientist*

Apr 6, 2020 - Dec 21, 2020

Tasks:

- Led the data science team in implementing Machine & Statistical Learning solutions, ensuring effective communication between technical and business units; Collaborated with business units to implement performance metrics that enhanced decision-making processes and operational efficiency; Facilitated communication between technical teams and senior management to ensure alignment of solutions with strategic objectives; Championed data-driven decision-making across the organization, successfully advocating for the adoption of statistics and machine learning to solve complex business challenges.

Address: SBS, Quadra 2, Bloco F - Ed. FNDE - Brasilia, DF, Brazil

2. *Data Scientist | Finance Specialist*

May 8, 2013 - Apr 5, 2020

Tasks:

- Developed several data mining and statistical models using Python and R; Implemented code to automate repetitive tasks and report generation; Created 'FisFa', a financial accountability software that saved over \$30 million for the Brazilian federal government between 2015 and 2018; Developed 'proPNLD', a forecasting solution to significantly enhance the accuracy of national product acquisition strategies; Designed the 'Malha Fina' accountability solution using anomaly detection techniques; 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 - Brasilia, DF, Brazil

University Center of Jaguariuna - UniFAJ

Lecturer in Economics

Jul 10, 2010 - Apr 30, 2013

Tasks:

- Instructor of undergraduate and graduate courses in economics, effectively communicating complex concepts to diverse audiences; Provided individualized academic support to students through tutoring sessions and office hours; Prepared, administered, and graded exams and assignments, ensuring comprehensive feedback.

Address: Rua Amazonas, 504 - UniFAJ - Jaguariuna/SP - Brazil

Brazilian Army - Infantry Branch

First Lieutenant

Feb 3, 2003 - Jun 22, 2009

Tasks:

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

SCIENTIFIC PRODUCTION

Peer-reviewed papers

1. Cançado A., Oliveira G., **Quadros A.**, Duczmal L. (2025) “A tree-spatial scan statistic”, *Environ Ecol Stat* 32, 953–978 <https://doi.org/10.1007/s10651-025-00670-w>.

2. Quadros A. (2024) “**mRpostman: An IMAP Client for R**”, *Journal of Open Research Software*, 12(1), p. 4. <https://doi.org/10.5334/jors.480>.
3. von Borries G., Quadros A. (2022) “**ROC App: an application to understand ROC Curves**”. *Brazilian Journal of Biometrics*, Volume 40, Issue 2. <https://doi.org/10.28951/bjb.v40i2.566>.
4. 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*, Volume 497, Issue 2, September 2020, Pages 1463-1474. <https://doi.org/10.1093/mnras/staa2072>.

Papers under review or preparation

1. Quadros A., Higgins M., Silverstein B. (????) “**A Bayesian Approach to Generating Distribution-based Signals in Pairs Trading**”, *Quantitative Finance* (Submitted in Jun. 2025).
2. Quadros A., Higgins M., Silverstein B. (????) “**Distribution-based Algorithms for Pairs Trading: a Block Bootstrap Approach**”, *Targetting SIAM Journal on Financial Mathematics* (In preparation).
3. Quadros A., Higgins M., Silverstein B. (????) “**Bayesian Estimation of Equipment Failure Risk in the Absence of Historical Failure Data**”, *Targetting IEEE Transactions on Reliability* (In preparation).
4. Quadros A., Higgins M., Silverstein B. (????) “**A Bayesian Sign-Conflict Diagnostic for Detecting False Positives in Cointegration Tests**”, (In preparation).

Conferences

1. Quadros A., Higgins M., Silverstein B. (2025) “**A Bayesian Approach to Generating Distribution-based Signals in Pairs Trading**”, *2025 SIAM Conference on Financial Mathematics and Engineering*. July 16, 2025, Miami, FL, USA.

Other Writing

1. Quadros A. (2025). “**Introduction to Data Analysis with R and the Tidyverse**”
On-line textbook used in my Data Analytics and Applications of Business Analytics courses at UNF. Available at: https://allanvc.github.io/book_IDART_en.
2. Quadros A. (2020). “**Introdução à Análise de Dados em R utilizando Tidyverse**”
On-line textbook previously used in my R courses. Available at: https://allanvc.github.io/book_IADR-T.
3. Quadros A. (????). “**Who is afraid of Math?**”
A book to help people overcome math anxiety. In preparation.

Open Source Software

1. **onlineretail** - Online Retail Dataset (2020)
CRAN stable version: <https://cran.r-project.org/package=onlineretail>
Dev version: <https://github.com/allanvc/onlineretail>
2. **mRpostman** - An IMAP Client for R (2019)
Selected as one of the top 40 new CRAN packages of August, 2019 by the “R Views Blog” from RStudio/Posit PBC.
CRAN stable version: <https://cran.r-project.org/package=mRpostman>
Dev version: <https://github.com/allanvc/mRpostman>
Official website: <https://allanvc.github.io/mRpostman>

3. **emstreeR** - Tools for Fast Computing and Plotting Euclidean Minimum Spanning Trees (2018)
CRAN stable version: <https://cran.r-project.org/package=emstreeR>
Dev version: <https://github.com/allanvc/emstreeR>

Private Software

1. **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.
Language: R
Company: Kansas State University / National Bio and Agro-Defense Facility (NBAF) / USDA
2. **Malha Fina (2020)**
Financial accountability and fraud detection software.
Language: Python
Company: Ministry of Education / National Fund for Educational Development (FNDE) - Brazil
3. **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.
Language: R
Company: Ministry of Education / National Fund for Educational Development (FNDE) - Brazil
4. **FisFa - Fiscaliza Fatura (2016)** (*Invoice conformity check*).
A software solution for financial accountability and contract management that enabled the Brazilian government to achieve over US\$ 50 million in savings between 2015 and 2018.
Language: Python
Company: Ministry of Education / National Fund for Educational Development (FNDE) - Brazil
Brazilian Patent: BR 51 2016 000212 3.

TEACHING

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| 1. Applications of Business Analytics
<i>Instructor, MSBA, University of North Florida</i> | Fall 2025 |
| 2. Data Analytics
<i>Instructor, MSBA, University of North Florida</i> | Fall 2025 |
| 3. Project Management
<i>Instructor, Undergraduate, University of North Florida</i> | Fall 2025 |
| 4. Inferential Statistics with Python
<i>Invited Lecturer, MBA, Escola Nacional de Administracao Publica (ENAP), Brazil</i> | Spring 2025 |
| 5. STAT341 - Biometrics II
<i>Instructor, Kansas State University</i> | Spring 2024 & 2025 |
| 6. STAT340 - Biometrics I
<i>Instructor, Kansas State University</i> | Spring 2023 & Fall 2024 |
| 7. Predictive Analysis - Machine Learning (distance)
<i>Invited Lecturer, MBA, FGV Management, Brazil</i> | Fall 2021 - Fall 2024 |
| 8. Exploratory Data Analysis (distance)
<i>Invited Lecturer, MBA, FGV Management, Brazil</i> | Fall 2021 - Fall 2024 |
| 9. STAT703 - Introduction to Statistical Methods for the Sciences
<i>Teaching Assistant, Kansas State University</i> | Summer 2023 & 2024 |

10. Advanced Predictive Analysis - Deep Learning (distance) *Spring 2022*
Invited Lecturer, MBA, FGV Management, Brazil
11. STAT351 - Business and Economic Statistics II *Fall 2023*
Teaching Assistant, Kansas State University
12. STAT325 - Introduction to Statistics *2021 - 2022*
Instructor, Kansas State University
13. Data Analysis with R - Introductory & Intermediate Levels *2018 - 2019*
Instructor, FNDE

SCHOLARSHIPS

1. **Dr. Lynn Ying-Shiang Lin Statistics Graduate Scholarship** *Fall 2024 - Spring 2025*
Scholarship awarded by the Department of Statistics in the College of Arts and Sciences at Kansas State University.
2. **Dr. Lynn Ying-Shiang Lin Statistics Graduate Scholarship** *Fall 2023 - Spring 2024*
Scholarship awarded by the Department of Statistics in the College of Arts and Sciences at Kansas State University.
3. **Ray & Carolyn Waller Scholarship** *Fall 2021 - Spring 2022*
Scholarship awarded by the Department of Statistics in the College of Arts and Sciences at Kansas State University.
4. **CAPES Scholarship** *Spring 2010 - Fall 2011*
Scholarship awarded by the Economics Department at the State University of Campinas - Unicamp.
5. **INOVA Scholarship** *Fall 2009*
Scholarship awarded by the Innovation Agency of the State University of Campinas - INOVA/Unicamp.

AWARDS AND RECOGNITION

1. **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.
2. **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.
3. **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.
4. **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.
5. **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.
6. **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.

7. 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.

8. 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.