DANIEL VARTANIAN

Complexity Scientist and Data Scientist

💼 EXPERIENCE

Present
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2024

Researcher
Sustentarea 📍 São Paulo, SP, Brazil

- Development of an agent-based model addressing the global syndemic phenomenon in Brazilian children under five years old.
- Development of data science reports.
- Creation of tools and software for scientific research.
- Development of training courses in R programming and open science.
- Fellowship from Brazil's National Council for Scientific and Technological Development (CNPq).

2025
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2022

Researcher
University of São Paulo (USP) 📍 São Paulo, SP, Brazil

- Development and analysis of the largest dataset on Brazilian chronotypes (n = 115,166).
- Conducted a new test of the hypothesis regarding the influence of latitude on the distribution of human chronotypes, based on new and higher-quality evidence, contributing to a deeper understanding of the phenomenon of entrainment (synchronization) of biological rhythms in ecological contexts.
- Creation of tools and software for scientific research.
- Participation in graduate-level courses, conferences, and symposia.
- Scholarship from the Brazilian Federal Agency for Support and Evaluation of Graduate Education (CAPES).

2024
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2024

Teacher
Government of the State of São Paulo 📍 São Paulo, SP, Brazil

- Teaching experience at Professor Colombo de Almeida State School and Captain Pedro Monteiro do Amaral State School, delivering lessons to technical high school classes.

2022
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2019

Researcher
University of São Paulo (USP) 📍 São Paulo, SP, Brazil

- Participation in projects using internal and external databases of varying sizes and complexities (e.g., Corações de Baependi Cohort (MG), Sleep and Pregnancy Project).
- Development of models and analyses of biological time series, as well as the creation of tools and software for scientific research, including the R packages {mctq} and {actverse}.
- Taught courses and co-authored the first Brazilian Actigraphy Consensus, published by the Brazilian Sleep Association.
- Led teams and projects, with a focus on mentoring and training early-career researchers.

View this résumé online at:
danielvartan.github.io/resume-en

For more information, please refer to my résumé on LinkedIn.

CONTACT

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- in danielvartan
- ⓘD 0000-0001-7782-759X

PROGRAMMING LANGUAGES

- Ⓡ R (Primary)
- 🐍 Python
- 🗄 SQL
- JS JavaScript
- HTML
- CSS
- Git

🎓 EDUCATION

2025
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2022

Master of Science (MSc), Complex Systems

University of São Paulo (USP) 📍 São Paulo, SP, Brazil

• USP is ranked among the top universities in the world (92nd in QS 2025 | 199th in THE 2025).
• Education in complexity science and complex systems modeling, with an emphasis on complex networks and agent-based models.
• Publication of one article and two abstracts presented at scientific symposia.
• Dissertation available at: danielvartan.github.io/mastersthesis

2021
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2016

Bachelor of Science (BSc), Marketing

University of São Paulo (USP) 📍 São Paulo, SP, Brazil

• USP is ranked among the top universities in the world (92nd in QS 2025 | 199th in THE 2025).
• Education with a quantitative approach and strong foundation in calculus, statistics, and finance. The USP program distinguishes itself by prioritizing analytical rigor and marketing science, in contrast to other undergraduate programs focused solely on communication and creation.
• Class ranking: 23rd out of 66.
• Four completed undergraduate research projects.

👤 AFFILIATIONS

Present
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2024

Resiclima Network

Researcher 📍 Recife, PE, Brazil

• Interinstitutional collaboration bringing together researchers dedicated to the study of climate change. Originating from various academic institutions, the network includes participation from Brazilian universities such as UFPE, UFPB, UFMA, UFAL, USP, UnB, UFRN, PUC-Rio, and UFU, as well as international partnerships.

Present
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2024

Sustentarea

Researcher 📍 São Paulo, SP, Brazil

• Research and Extension Center affiliated with the School of Public Health (FSP) at the University of São Paulo (USP), dedicated to promoting scientific research in food systems, sustainable food, and the global syndemic.

Present
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2021

rOpenSci

Software Developer and Maintainer 📍 Berkeley, CA, United States

• International nonprofit organization that promotes open and reproducible research using the R programming language.

2022
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2016

Interdisciplinary Sleep Research Group (GIPSO)

Researcher 📍 São Paulo, SP, Brazil

• Research group affiliated with the School of Arts, Sciences and Humanities (EACH) at the University of São Paulo (USP).

LANGUAGES

English

🦻 Fluent
📖 Fluent
💬 Fluent
✏️ Fluent

Portuguese

🦻 Fluent
📖 Fluent
💬 Fluent
✏️ Fluent

Spanish

🦻 Fluent
📖 Fluent
💬 Intermediate
✏️ Intermediate

SKILLS

• Statistical modeling
• Machine learning
• Complex systems modeling
• Agent-based modeling
• Dynamic systems modeling
• Complex network modeling
• Temporal data analysis
• Spatial data analysis
• Software development
• Data engineering
• Data visualization
• Dashboards (with R Shiny)
• Technical and academic writing
• Graphic design

PROJECTS

2025 — **LogoClim**
Creator and Maintainer

- NetLogo model developed to simulate and visualize climate conditions using data from WorldClim 2.1.

2025 — **actverse**
Creator and Maintainer

- R package for actigraphy data analysis.

2024 — **brandr**
Creator and Maintainer

- R package developed for managing brand visual identity in products and data reports using the brand.yml standard.
- Published on The Comprehensive R Archive Network (CRAN).

2023 — **abnt**
Creator and Maintainer

- Quarto template for theses and dissertations following Brazilian Association of Technical Standards (ABNT) guidelines.

2021 — **mctq**
Creator and Maintainer

- R package for processing and analyzing the Munich ChronoType Questionnaire (MCTQ).
- Published on The Comprehensive R Archive Network (CRAN) (+10,000 downloads).
- Peer-reviewed by the rOpenSci Initiative.

MAIN ACADEMIC PUBLICATIONS

2024 — **Is latitude associated with chronotype?**
University of São Paulo

- Master's dissertation.

2023 — **Actigraphic characterization of sleep and circadian phenotypes of PER3 gene VNTR genotypes**
Chronobiology International

- Scientific article (IF 2023: 2,2/JCR | Qualis P. 2017-2020: A1).

2021 — **Consenso Brasileiro de Actigrafia**
Segmento Farma Editores

- Consensus on Actigraphy prepared for the Brazilian Sleep Association (book).

2020 — **Early chronotype with advanced activity rhythms and dim light melatonin onset in a rural population**
Journal of Pineal Research

- Scientific article (IF 2023: 8,3/JCR | Qualis P. 2017-2020: A1).

ORGANIZATIONS

An Introduction to the R Programming Language
School of Public Health at the University of São Paulo (2025)

Agent-Based Modeling Study Group
University of São Paulo (2024)

Introductory Course on Actigraphy
XVIII Brazilian Sleep Congress (2021)

Sleep at EACH
Wellness project focused on creating sleep spaces for students, developed at the School of Arts, Sciences, and Humanities, University of São Paulo (2017).

COURSES

Introduction to Agent-Based Modeling
Santa Fe Institute (2024, Complexity Explorer)

São Paulo School of Advanced Science on Ecology of Human Sleep and Biological Rhythms
University of São Paulo (2022)

Circadian Clocks: How Rhythms Structure Life
Ludwig-Maximilians-Universität München (2022, Coursera)

R Programming
Johns Hopkins University (2020, Coursera)

Access and Use of Technical-Scientific Information
University of São Paulo (2013)

Art and Technique of Academic Writing
University of São Paulo (2013)