

# DANIEL VARTANIAN

Interdisciplinary researcher specializing in agent-based modeling, complex systems, and research software engineering, primarily in social, public health, and environmental contexts. Highly skilled in R (incl. package development), NetLogo, Python, data visualization, user interfaces (GUIs), and reproducible research. Experienced in leading and collaborating across interdisciplinary teams, developing user-friendly scientific tools, and supporting stakeholder engagement. Fluent in English and Portuguese. Prepared to relocate and integrate into new institutional and cultural environments.

*Additional supporting documents, detailed outputs, and original references available upon request or via links below.*

*Legal name: Daniel Kachvartanian de Azevedo  
Professional and social name: Daniel Vartanian*



Access this CV online at:  
[danielvartan.github.io/cv-research](https://danielvartan.github.io/cv-research)

## EDUCATION

2025  
|  
2022

### MSc, Complex Systems Modeling

University of São Paulo (USP)

📍 São Paulo, SP, Brazil

- Focus on agent-based and computational modeling of complex social, public health, and environmental systems
- Published one [peer-reviewed article](#) and presented two conference [abstracts](#)
- Two further articles for peer-reviewed publication in preparation
- Founded the Agent-Based Modeling Study Group (USP)
- Thesis: [danielvartan.github.io/mastersthesis](https://danielvartan.github.io/mastersthesis)

2022  
|  
2016

### BSc, Marketing

University of São Paulo (USP)

📍 São Paulo, SP, Brazil

- Strong quantitative foundation in statistics, calculus, and finance
- Prioritized analytical rigor and marketing science
- Graduated 23rd/66
- Final grade: 7.7/10
- Four undergraduate research/outreach projects
- Co-founded the [Wellness and Health Commission](#) (EACH-USP)

## RESEARCH EXPERIENCE

Present  
|  
2024

### Research Fellow

[Sustentarea](#) (FSP-USP)

📍 São Paulo, SP, Brazil

Lead modeler on the [Global Syndemic](#) project (CNPq-funded):

- Develop agent-based models investigating how climate change impacts child nutrition and health
- Create and document NetLogo models/flexible GUIs for exploring climate and food outcomes (e.g., [LogoClim](#), [FoodClim](#))
- Develop data science reports and [reproducible research software](#)
- Design, deliver, and maintain training in [R](#) and [open science](#)
- Collaborate with nutrition/public health stakeholders
- Support cross-disciplinary and multi-institutional project teams

## CONTACT

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🌐 [danielvartan](#)

in [danielvartan](#)

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## REFERENCES

[Prof. Dr. Aline Carvalho](#)

Department of Nutrition  
School of Public Health  
University of São Paulo

[Prof. Dr. Camilo R. Neto](#)

Graduate Program in Complex  
Systems Modeling  
School of Arts, Sciences and  
Humanities  
University of São Paulo

[Prof. Dr. Leandro Garcia](#)

Senior Lecturer in Complexity  
Science in Public Health  
Centre for Public Health  
Queen's University Belfast

*Developed with R [pagedown](#) and  
[datadrivencv](#) packages*

*Source code available at  
[github.com/danielvartan/cv-research](https://github.com/danielvartan/cv-research)*

*Last updated on June 21, 2025*

2025  
|  
2022

### Graduate Research Fellow

University of São Paulo (USP)

📍 São Paulo, SP, Brazil

- Led analysis on Brazil's largest human chronotype dataset (n=115,166)
- Conducted advanced data/statistical modeling on latitude and circadian phenotype
- Authored research software for data **analysis** and **visualization**
- Participated in international seminars and graduate-level symposia
- Supported undergraduate teaching/internship in computational methods

2022  
|  
2019

### Assistant Research Fellow

University of São Paulo (USP)

📍 São Paulo, SP, Brazil

- Developed models of biological time series and open-source R packages (e.g., **{mctq}** and **{actverse}**)
- Co-authored the first **Brazilian Actigraphy Consensus** and delivered associated **training**
- Managed, trained, and mentored interdisciplinary teams
- Organized and promoted extension and outreach activities with public sector and health stakeholders

2019  
|  
2016

### Undergraduate Research Fellow

University of São Paulo (USP)

📍 São Paulo, SP, Brazil

- Organized and promoted **outreach initiatives**
- Provided technical and analytical research support
- Led initiatives in **science communication**, public outreach, and collaborative academic events



## TEACHING EXPERIENCE

2025

### An Introduction to the R Programming Language

University of São Paulo (USP)

📍 São Paulo, SP, Brazil

2024

### Technical High School Program in Administration

Government of the State of São Paulo

📍 São Paulo, SP, Brazil

(State school teacher)

2023

### ACH0042 – Problem Based Learning II

University of São Paulo (USP)

📍 São Paulo, SP, Brazil

(Graduate teaching intern)

2021

### Introductory Course on Actigraphy

18th Brazilian Sleep Congress

📍 São Paulo, SP, Brazil



## HONORS, AWARDS & FELLOWSHIPS

2025  
|  
2024

### Technological and Industrial Development (DTI-B) Research Fellowship

National Council for Scientific and Technological Development (CNPq)

## AFFILIATIONS

**RESICLIMA Network**

Researcher (2024–Present)

**Sustentarea**

Researcher (2024–Present)

**rOpenSci**

Software Developer and Maintainer (2021–Present)

**Interdisciplinary Sleep Research Group (GIPSO)**

Researcher (2016–2022)

## LANGUAGES



**danielvartan**

English



Fluent



Fluent



Fluent



Fluent

Portuguese



Fluent



Fluent



Fluent



Fluent

Spanish



Fluent



Fluent



Intermediate



Intermediate

French



Basic



Basic



Basic



Basic

2024  
|  
2022

### Master's Research Fellowship

Coordination for the Improvement of Higher Education Personnel (CAPES)

2023

### 2nd Best Work

30th International Symposium on Undergraduate Research of the University of São Paulo (SIICUSP)

2021  
|  
2016

### Undergraduate Fellowships

University of São Paulo (USP)

2019

### Best-Performing Project

Innovation and Entrepreneurship Incentive Program (InovaGrad) of the University of São Paulo (USP)



## OUTREACH PROJECTS

Present  
|  
2024

### Agent-Based Modeling Study Group

University of São Paulo (USP)

📍 São Paulo, SP, Brazil

Study group for researchers, students, and professionals interested in learning about and using agent-based models.

2018  
|  
2017

### Durma na EACH (Sleep at EACH)

University of São Paulo (USP)

📍 São Paulo, SP, Brazil

Wellness project focused on creating sleep spaces for students, developed at EACH-USP.



## SELECTED TALKS

2025

### Prediction and Interaction in Agent-Based Models

Agent-Based Modeling Study Group

📍 Online

2025

### Modeling the Global Syndemic with ABM

University of São Paulo (USP)

📍 São Paulo, SP, Brazil

2024

### Exploring Complexity with Agent-Based Models

RESICLIMA Network

📍 Recife, PE, Brazil

2021

### {mctq}: An R Package for the Munich ChronoType Questionnaire

useR! 2021 Conference

📍 Held online due to COVID-19



## SELECTED SOFTWARE PROJECTS

2025

### LogoClim

Creator and Maintainer

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

## PROGRAMMING LANGUAGES

 [danielvartan](#)

Expert

 R

 NetLogo

Advanced

 Python

 SQL

Intermediate

 Bash

 JavaScript

Beginner

 C C++ C#

 Scala

 GAML (GAMA)

 GDScript (Godot)

 Julia

 Lua

 PHP

Markup/Other Languages

 CSS

 Git

 HTML

 Markdown

 SASS

 SPSS

 TeX LaTeX

- 2025 ● **FoodClim**  
Creator and Maintainer  
**NetLogo** model designed to simulate how food yield responds to different climate conditions.
- 2025 ● **actverse**  
Creator and Maintainer  
R package providing a tidyverse-style toolbox for **actigraphy** data analysis.
- 2021 ● **mctq**  
Creator and Maintainer  
R package providing a tidyverse-style toolbox for processing and analyzing the Munich ChronoType Questionnaire (**MCTQ**).  
• Published on **CRAN** (+10,000 downloads)



## SELECTED PUBLICATIONS

- 2024 ● **Is Latitude Associated with Chronotype?**  
University of São Paulo (**USP**)  
Vartanian, D. (2024). *Is latitude associated with chronotype?* [Master's thesis, University of São Paulo]. <https://doi.org/10.17605/OSF.IO/YGKTS>
- 2023 ● **Actigraphic Characterization of Sleep and Circadian Phenotypes of PER3 Gene VNTR Genotypes**  
Chronobiology International  
Viana-Mendes, J., Benedito-Silva, A. A., Andrade, M. A. M., Vartanian, D., Gonçalves, B. da S. B., Cipolla-Neto, J., & Pedrazzoli, M. (2023). Actigraphic characterization of sleep and circadian phenotypes of PER3 gene VNTR genotypes. *Chronobiology International*, 40(9), 1244–1250. <https://doi.org/10.1080/07420528.2023.2256858>  
• Impact factor: 2.2/**JCR** (2023)
- 2021 ● **Brazilian Actigraphy Consensus**  
Segmento Farma Editores  
Pedrazzoli, M., & Gonçalves, B. S. B. (Eds.) (with Benedito-Silva, A. A., Toscanini, A. C., Souza, A. P. P. B., Conway, B. A., Vartanian, D., Santos, E. H. R., Pires, M. L. N., & Leocadio-Miguel, M. A.). (2021). *Consenso brasileiro de actigrafia* [Brazilian actigraphy consensus]. Segmento Farma Editores.
- 2020 ● **Early Chronotype with Advanced Activity Rhythms and Dim Light Melatonin Onset in a Rural Population**  
Journal of Pineal Research  
Ruiz, F. S., Beijamini, F., Beale, A. D., Gonçalves, B. D. S. B., Vartanian, D., Taporoski, T. P., Middleton, B., Krieger, J. E., Vallada, H., Arendt, J., Pereira, A. C., Knutson, K. L., Pedrazzoli, M., & Von Schantz, M. (2020). Early chronotype with advanced activity rhythms and dim light melatonin onset in a rural population. *Journal of Pineal Research*, 69(3). <https://doi.org/10.1111/jpi.12675>  
• Impact factor: 8.3/**JCR** (2023)

## TECHNICAL SKILLS

- Statistical modeling
- Complex systems modeling
- Agent-based modeling  
(**NetLogo**, **GAMA**, **Python**/**Mesa**)
- Programming  
(**R**, **Python**, **NetLogo**, **SQL**)
- Machine learning
- Temporal data analysis
- Spatial data analysis
- Data visualization  
(**Shiny**, **Plotly**, **Quarto**, **R Markdown**)
- Research software development  
(**CRAN**, **rOpenSci**, **GitHub**)
- Open science practices
- Reproducible research
- Project management
- Technical and academic writing
- Proposal/grant writing
- Community building and management
- Cross-sector teamwork
- Scientific communication  
(**Oral**, **written**, **visual**)
- Graphic and web design