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

CONTACT

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🎓 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

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

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

Last updated on June 18, 2025

Graduate Research Fellow

2025 — 2022

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

Assistant Research Fellow

2022 — 2019

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

Undergraduate Research Fellow

2019 — 2016

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

An Introduction to the R Programming Language

2025

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

Technical High School Program in Administration

2024

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

(State school teacher)

ACH0042 - Problem Based Learning II

2023

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

(Graduate teaching intern)

Introductory Course on Actigraphy

2021

18th Brazilian Sleep Congress 📍 São Paulo, SP, Brazil

HONORS, AWARDS & FELLOWSHIPS

Technological and Industrial Development (DTI-B) Research Fellowship

2025 — 2024

National Council for Scientific and Technological Development (CNPq)

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.

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