# John C. Flournoy, PhD

Principal Research Scientist, Stats Maven

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🌐 Google Scholar

Ⓛ in/johnflournoy

## Education

*Ph.D.*, Psychology, University of Oregon, 2018
*M.S.*, Psychology, University of Oregon, 2014
*B.A.*, Cognitive Science, University of California at Berkeley, 2005

## Research

**Developer Success Lab**, Pluralsight — *Principal Research Scientist*

2024 - 2025

- Lead scientist surfacing qualitative insights from infrastructure workers
- Lead scientist on analysis of yearly ticket data from over 11k developers
- Drove organizational insights across multiple research projects to remove barriers to learning and hone organizational strategy.
- Spearheaded community engagement overlay journal at dsl.pubpub.org.

**Harvard University**, Cambridge, MA — *Research Associate*

2020 - 2024 (Postdoctoral Fellow, 2018-2020)

- Lead analyst on intensive longitudinal fMRI neuroimaging study examining method reliability and reporting on mechanisms linking stress to psychopathology in adolescents.
- Designed intensive longitudinal digital phenotyping of stress, sleep, digital communication, and physical activity leading to 3 publications. NIMH grant R37-MH119194 ($9,034,169)
- Analyzed multi-site, longitudinal fMRI data of adolescent cognitive control and reward (NIMH grant U01-MH109589; $17,141,357).
- Provided methodology and scientific computing support to 8 graduate students, 15 post-bac RAs, and 9 post-docs, across 2 lab groups

**University of Oregon**, Eugene, OR — *Graduate Research Fellow*

2012 - 2018

- Developed hierarchical Bayesian model of reinforcement learning to examine adolescent social motives as causes of health risking behavior.
- Collected data from more than 300 participants including foster-care-involved adolescents with a team of research assistants.
- Analyzed longitudinal personality and fMRI task data using MLM & SEM.
- Validated new self report and task measures

**Stanford University**, Stanford, CA — *Research Coordinator*

2009 - 2012

- Coordinated Simons Foundation-funded study examining link between sleep problems and symptoms in autism spectrum disorder.
- Site coordinator for a registered clinical trial of the efficacy of a novel PET

## Skills

- Autodidact
- Bayesian modeling
- Causal inference
- Collaborative science
- Cloud computing
- Data visualization
- Git and GitHub
- Human participants research
- Machine learning
- Missing data
- Multilevel modeling
- Psychometrics
- Qualitative Methods
- R, Stan, Python, SQL
- Research design
- Structural Equation Modeling
- Transparent and open science

## Awards

The Sackler Scholar Programme in Psychobiology Research Grant, 2019

Gary E. Smith Summer Professional Development Award, 2015

Clarence and Lucille Dunbar Scholarship , 2014

## R Packages ⑂

`riclpmr`: generate syntax for random intercept cross-lag panel models.

`curvish`: (alpha) Bayesian analysis and visualization of GAM smooths using 1st and 2nd derivatives.

`scorequaltrics`: retrieve and score data from Qualtrics using csv templates.

marker of cerebral β-amyloid in patients with dementia.

## Selected Publications

*See [google scholar](#) for the full list of more than 25 peer-reviewed articles*

**Flournoy, J. C.,** Lee, C. S., Wu, M., & Hicks, C. M. (2025). No Silver Bullets: Why Understanding Software Cycle Time is Messy, Not Magic (No. arXiv:2503.05040). *arXiv*. (Under review at *Empirical Software Engineering*)

**Flournoy, J. C.**, Bryce, N. V., Dennison, M. J., Rodman, A. M., McNeilly, E. A., Lurie, L. A., ... & McLaughlin, K. A. (2024). A precision neuroscience approach to estimating reliability of neural responses during emotion processing: Implications for task-fMRI. *NeuroImage*, *285*, 120503.

Bryce, N., **Flournoy, J.C.**, Moreira, J. F. G., Rosen, M. L., Sambook, K. A., Mair, P., & McLaughlin, K. A. (2021). Brain parcellation selection: An overlooked decision point with meaningful effects on individual differences in resting-state functional connectivity. *NeuroImage*, 118487.

**Flournoy, J. C.**, Vijayakumar, N., Cheng, T. W., Cosme, D., Flannery, J. E., & Pfeifer, J. H. (2020). Improving practices and inferences in developmental cognitive neuroscience. *Developmental cognitive neuroscience*, 100807.

Ludwig, R. M., **Flournoy, J. C.**, & Berkman, E. T. (2019). Inequality in personality and temporal discounting across socioeconomic status? Assessing the evidence. Journal of research in personality, 81, 79-87.

Matta, T. H., **Flournoy, J. C.**, & Byrne, M. L. (2018). Making an unknown unknown a known unknown: Missing data in longitudinal neuroimaging studies. *Developmental cognitive neuroscience*, 33, 83-98.

## Selected Teaching & Talks

November, 2021. *Why and How to Care About Covariates in Longitudinal Data*. Presented at the 7th Annual UC Adolescence Consortium Institute.

July 2021. Instructor at [*ABDC Workshop: Modeling Developmental Change*](#) *(online):*
- Data science tools tutorials
- Structural Equation Modeling (SEM): Theory
- Structural Equation Modeling (SEM): Hands-on tutorial

May 2021. *Scientific Practice in Developmental Cognitive Neuroscience*. Presented at the Lifespan Informatics and Neuroimaging Center, Department of Psychiatry, University of Pennsylvania Perelman School of Medicine.

May 2019. *Machine learning as a tool for diagnosis and theory testing*. Presented as part of the Institute for Technology in Psychiatry Seminar Series, McLean Hospital, Boston, MA.

## Special Training

Neurohackweek, 2016
· Python programming and neuroinformatics

ICPSR Summer Program in Quantitative Methods of Social Research, 2015
· Causal Inference for the Social Sciences
· Advanced Bayesian Models for the Social Sciences