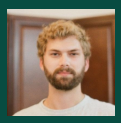

John Thorp

PhD Candidate in
cognitive neuroscience

Details

112 Eagle Street
Brooklyn, NY

(919) 971 - 3656

john.n.thorp@gmail.com

Skills

Project management
Experimental design
Statistical analysis
Verbal communication
Written communication

Software

- Qualtrics
- R (tidyverse, ggplot)
- Python
- Matlab
- UNIX
- Slurm
- Microsoft Office
- Google Suite

Methods

- Behavioral surveys
- Neuroimaging
- Large datasets (~2 TB)
- NLP
- Independent components analysis
- Unstructured data
- Graph theory

Statistical Analysis

- Linear regression
- Non-linear regression
- Multilevel regression
- Bayesian regression
- Non-gaussian response distributions (binomial, shifted log-normal, etc.)
- Data visualization

Profile

Through my experiences with research, consulting, and science communication, I possess a unique skill set that allows me to leverage experimentation and data-driven analytics to communicate novel insights and build impactful models.

Employment

Research Fellow | Davachi Construction Organization and Reactivation of Experience Laboratory, Columbia University, New York City

SEPTEMBER 2019—PRESENT

Conducted end-to-end behavioral and neuroimaging research on original questions with far-reaching impacts on theories of the brain

Utilized unsupervised machine learning in large-scale neuroimaging analysis to discover novel functional regions of the brain, publishing systematic recommendations for the field

Leveraged non-linear multilevel Bayesian regression to uncover novel sources of variance across subject behavior with theoretical and clinical relevance

Applied cutting-edge NLP techniques to reveal similarities across unstructured transcripts of memory recalls and their relationship to neural organization and mechanisms

Communicated these results in conference posters, talks, and peer-reviewed manuscripts

Graduate Research Assistant | Science of Learning Research Initiative, Columbia University, New York City

JANUARY 2022—PRESENT

Consulted for 5 separate innovative studies quantifying the impact of classroom interventions on learning outcomes, including ungrading, EEG neurofeedback, and VR/AR

Developed a robust python package rectifying a widespread connection issue with the MUSE mobile EEG headset

Used time-series analyses to derive the neural features most predictive of real-time student engagement

Analyzed data from thousands of medical student assessments to arrive at recommendations of how to minimize biased discrepancies across race and gender

Spearheaded manuscript preparation by synthesizing perspectives and priorities of a large interdisciplinary team including educator-physicians and support staffts

Research Associate | Adcock Laboratory, Duke University, Durham

JULY 2017—MAY 2019

Programmed and collected data from wearable EEG headsets and eyetrackers through APIs

Managed protocols, budgets, and 100s of participants for 5 behavioral and neuroimaging studies

Contributed original analysis of large neural dataset to Nature publication

Education

M.A., M.Phil., Columbia University in the City of New York

AUGUST 2019—PRESENT

B.A., University of North Carolina at Chapel Hill, Chapel Hill

AUGUST 2013—MAY 2017