Cade Abrams, PhD

As an accomplished data scientist and researcher, I excel in cleaning, analyzing, and managing data sets to derive technical insights to advance research and inform decisions. My passion lies in solving complex problems by leveraging advanced analytical techniques, including predictive models. Trained as an interdisciplinary scientist and educator, I am skilled in effectively communicating complex results to technical and non-technical audiences.

EXPERIENCE

Aug 2022 | Present

Postdoctoral Research Fellow – Data Scientist

University of South Carolina — Columbia, South Carolina

- Conduct advanced statistical analyses using R, including regression modeling and hypothesis testing, to extract meaningful insights for academic manuscripts.
- Apply innovative data processing techniques, enhancing sensitivity to developmental changes resulting in effect sizes 3 times larger than traditional techniques.
- Collaborate with cross-functional and international teams to conduct statistical analyses, optimize data processing, and ensure the success of ongoing research projects.
- Manage project workflows effectively on GitHub, streamlining research processes through version control and collaborative tools.

Aug 2019 | Aug 2022

Doctoral Graduate Assistant

University of South Carolina — Columbia, South Carolina

- Collaboratively managed a 4-year project through data collection, management, cleaning, and predictive modeling to advance motor skill and cognitive assessments resulting in 5 publications and 12 presentations.
- Saved 42 manual hours across 8 data collections with custom R functions, designed to improve data processing efficiency and reduce data entry errors.
- Developed custom data indices for ROTC yielding actionable insights to optimize training, resulting in a 16% increase in ACFT pass rates across 1.5 years (~135 Cadets in sample).

SELECT PROJECTS

Summer 2023

3-D Model of Motor and Cognitive Solutions

https://github.com/Tcabrams44/complexity-dual-task-conceptual

Python code creates 3 visual diagrams, simplifying complex motor-cognitive relations for non-technical audiences.

- Interdisciplinary Research
- Jupyter Notebook
- Data Visualization
- Creativity

Spring 2023

Beyond Traditional Approaches: Examining the Impact of SKIPping with PAX on Post-Error Slowing in Rural Preschoolers

https://osf.io/jyzpx/?view_only=24a908b0a4c842b2843f43a4a37bfd73

Open Science Framework project for statistical analysis of cutting-edge data processing methods in an academic manuscript.

- Quantitative Analysis
- Data Interpretation
- Data Visualization
- Hypothesis Testing

Spring 2021

Custom R Script for Processing and Scoring Army Combat Fitness Test Results

https://github.com/Tcabrams44/ACFT-Custom-Script

R functions score raw ACFT event data, including times, accurately and efficiently.

- Anonymous Functions
- Automation
- Data Wrangling
- Data Processing

CONTACT INFO

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cade4420@gmail.com
github.com/Tcabrams44
cade-abrams-phd

For more information, please contact me via email.

EDUCATION

BS in Exercise Science

Lander University
Aug 2017

MAT in Physical Education

University of South Carolina
Aug 2019

PhD emphasis in Motor Behavior

University of South Carolina

Dec 2022

Subspecialties in: **Statistics** and **Cognitive Neuroscience**

SKILLS

- R
- Python
- Markdown
- Statistical Analysis
- Data Cleaning
- Data Wrangling
- Version Control
- Experimental Design
- Microsoft Excel

Commonly Used Libraries

R

broom · conflicted · dplyr · ggplot2 · Hmisc · lubridate · magrittr · purr · readr · stringr · tibble

Python

glob · ipywidgets · Matplotlib · NumPy · os · pandas · PsychoPy · random · shutil