

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 innovative methodologies and advanced analytical techniques. Trained as an interdisciplinary scientist and educator, I am skilled in effectively communicating complex results to technical and non-technical audiences.



EXPERIENCE

- Nov 2023
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Present

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Staff Data Scientist

Booz Allen Hamilton

Client Site

- Lead the exploration and implementation of a data solution resulting in direct cost savings of \$265,000 per year for stakeholders.
 - Work directly with stakeholders to design and prototype data solutions that maximize adoption and efficacy for end-users by conducting interviews and incorporating user interface (UI) and user experience (UX) feedback.
 - Develop custom logic/scripts to ensure data quality and integrity by validating user inputs.
 - Provide on-going coaching of data topics (e.g., visualization, data mining, analytic techniques) to technical and non-technical audiences.
- Aug 2022
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Nov 2023

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Postdoctoral Research Fellow – Data Scientist

University of South Carolina

Columbia, South Carolina

- Conducted advanced statistical analyses using R, including regression modeling and hypothesis testing, to extract meaningful insights for academic manuscripts.
 - Applied innovative data processing techniques, enhancing sensitivity to developmental changes resulting in effect sizes 3 times larger than traditional techniques.
 - Collaborated with cross-functional and international teams to conduct statistical analyses, optimize data processing, and ensure the success of ongoing research projects.
 - Managed project workflows effectively on GitHub, streamlining research processes through version control and collaborative tools.
- Aug 2019
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Aug 2022

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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).



CONSULTING & FREELANCE WORK

- Oct 2023
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Present

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Biostatistician

Therabody

Remote

- Contribute to Therabody's evidence-based approach to product development by leveraging statistical insights to guide decisions on current and future Therabody products.
 - Collaborate remotely with cross-functional teams, translating statistical insights into actionable strategies for enhancing Therabody products.
 - Lead Therabody Labs data pipeline development and robotic process automation initiatives to maximize return on investments and streamline workflows.
 - Mentor junior scientists at Therabody Labs in proper data management, analysis, and reporting techniques.

CONTACT INFO

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github.com/PlayfulMaven
in 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
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 · scikit-learn · shutil

</> SELECT PROJECTS

Summer
2023

● 3-D Model of Motor and Cognitive Solutions

🔗 <https://github.com/PlayfulMaven/complexity-dual-task-conceptual>

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

- Interdisciplinary Research
- Data Visualization
- Jupyter Notebook
- 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 resulting in an academic manuscript.

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

Spring
2021

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

🔗 <https://github.com/PlayfulMaven/ACFT-Custom-Script>

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

- Custom Functions
- Data Wrangling
- Automation
- Data Processing