Garrick Aden-Buie Data Scientist

> Motivated, life-long learner. Always looking for questions and answers in the data. Passionate about collaboration, communicating insights, and sharing knowledge. Known as a highly organized, perceptive, and resourceful team player.

ABOUT

garrickadenbuie.com
garrick@adenbuie.com
(727) 344-9568
St. Petersburg, Florida (US)
GitHub: gadenbuie
Twitter: grrrck

LANGUAGES

English (Native)
Spanish (Superior ACTFL/ETS)

SKILLS

ADVANCED
  R
  Shiny
  Git
  RMarkdown
  R Package Development
  SQL (MySQL, SQLite, etc.)
  Bash
  MS Office (Excel, etc.)

INTERMEDIATE
  Python
  HTML
  CSS
  PHP
  MQTT

FAMILIAR
  JavaScript
  Julia
  Go

OPERATING SYSTEMS
  Linux (Debian, Ubuntu, Other)
  macOS
  Amazon AWS
  Docker
  Windows

EDUCATION

University of South Florida
2012 — 2018
Ph.D. (expected 2018), MSIE (2014), Industrial and Management Systems Engineering
Courses: Deep Learning, Statistical Design Models, Large-Scale Optimization, Advanced Analytics, Bayesian Data Analysis

Universidad Autónoma de Madrid and Syracuse University in Madrid
2005 — 2006
Study Abroad, Spanish

Lehigh University
2002 — 2007
B.S. Applied Math, B.A. Spanish, Physics (minor)

PROFESSIONAL EXPERIENCE

Research Data Analyst II (Bioinformatics)
Present
May 2018
Moffitt Cancer Center, Cancer Epidemiology

> Conduct advanced bioinformatic or statistical analyses; develop and utilize appropriate software methodologies for emerging genomic technologies; work with systems and solutions architects to coordinate development efforts throughout the data lifecycle; and benchmark new tools for high-dimensional data analysis as well as develop and apply novel analytic approaches to existing molecular epidemiology data.

Project Coordinator and Research Associate
Jan 2018
Sep 2014
University of South Florida
usf.edu/engineering/create-health/

> Led diverse team of Ph.D., masters and undergradute students in development and evaluation of large smart home project for monitoring the daily activities of community-dwelling, independent older adults.

- Managed 3 Ph.D., 5 Masters, and 4 undergraduate REU students
- Lead software developer for remote sensor data collection, processing, storage, administration, and visualization
- Developed several R packages and Shiny dashboards and interactive front-ends for inventory management and data processing
- Provisioned and adminsistered servers hosting MySQL and various microservices; remote data collection systems running on Raspberry Pis
- Designed and implemented notification microservice for near-real-time evaluation and alerting for emergent conditions

R Package Developer: MCTestAnalysis
Mar 2017
Jul 2016
University of South Florida
gadenbuie.github.io/mctestanalysis/

> Developed an R package for Multiple-Choice Test Analysis for educators who are not comfortable programming. The package includes a web interface for interactive exploration of test results, or a generated report based on best practices for the design and evaluation of multiple-choice tests.

Research Assistant
Sep 2014
Sep 2013
University of South Florida

> Various tasks and responsibilities in support of engineering education at USF.

Research Assistant
Sep 2013
Jun 2012
Patel College of Global Sustainability, USF
usf.edu/pcgs/

- Research and design of an urban metabolism model for the USF Tampa Campus.
- Supervised research of two undergraduate students (Spring 2013).
- Assistant to the Director of the Office of Sustainability, USF. Coordinated, analyzed and prepared reports on campus sustainability-related initiatives.
- Assist with research objectives of PCGS and in the preparation of reports, lectures and talks by PCGS staff and faculty.

VOLUNTEER EXPERIENCE

President, INFORMS Student Chapter at USF
2014 — 2015

Served as President of the USF student chapter of INFORMS, the leading international association for Operations Research and Analytics professionals.

- Started a student-led monthly journal club to share and disseminate cutting-edge publications in statistics, machine learning, and operations research.
- Initiated a travel grant supported by internal fundraising to partially finance the attendance of chapter members at the INFORMS Annual Meeting.
- Organized and led a college-wide code and data bootcamp for undergraduate and graduate students, featuring hands-on learning of data science and programming principles.
- Led planning team for INFORMS@USF Code & Data Bootcamp, built comprehensive webpage, organized sessions and source code, and presented multiple sessions on programming and data science with R.

Peace Corps
2008 — 2009

Youth Development Specialist

Served in the Peace Corps in Gualaceo, Ecuador, working in conjuction with local organizations to provide leadership training to children and youth among a number of other highlights listed below.

- Created and implemented life-skills training program, educating 70 at-risk middle school students.
- Led Peace Corps Ecuador's Anti-Trafficking In Persons committee and raised $1,500 for a shelter for trafficked women in a contest-based fundraising initiative.
- Individually tutored seven middle- and high-school students and two college math students in math topics such as Trigonometry, Fractions, Algebra and Calculus.
- Designed interactive graphics and edited a six-month, biweekly column published in the leading provincial newspaper, appealing to both children and parents, highlight topics including hygiene, public health and children's rights.
- Organized and delivered an educational course for parents on drug and alcohol prevention in high-risk community.

PUBLICATIONS

Comparison of Final Examination Formats in a Numerical Methods Course
2015

International Journal of Engineering Education

Garrick Aden-Buie, A. Kaw, Ph.D., A. Yalcin, Ph.D.

Rough Set Theory Based Prognostic Classification Models for Hospice Referral
2015

BMC Medical Informatics and Decision Making

E. Gil-Herrera and Garrick Aden-Buie, A. Yalcin, Ph.D., A. Tsalatsanis, Ph.D., L.E. Barnes, Ph.D., B. Djulbegovic, Ph.D.

Introduction to Engineering Design: Piloting design projects for the first year engineering experience
2014

Sixth Annual First Year Engineering Experience Conference

J. Gaines, Ph.D., B. Joseph, Ph.D., Garrick Aden-Buie

Are multiple-choice questions suitable for a final examination in a STEM course?
2014

American Society for Engineering Education

Garrick Aden-Buie, A. Kaw, Ph.D., A. Yalcin, Ph.D., R. Pendyala, Ph.D.

PRESENTATIONS

Unsupervised behavior change detection using passive sensor systems in the homes of older adults
2018-05-07
11th World Conference of Gerontechnology
garrickadenbuie.com/talk/isg-2018/
Garrick Aden-Buie, A. Yalcin, Ph.D., C. VandeWeerd, Ph.D.

A Gentle Guide to the Grammar of Graphics with ggplot2
2018-01-23
Tampa R Users Meetup
gadenbuie.github.io/trug-ggplot2
An introduction to data visualization with the R package ggplot2

Occupant Activity Profiles from Smart Home Sensor Event Streams
2017-10-25
INFORMS Annual Meeting
garrickadenbuie.com/talk/informs-2017/
Garrick Aden-Buie, A. Yalcin, Ph.D., C. VandeWeerd, Ph.D.

Getting StaRted in R
2016-03-25
INFORMS@USF Code & Data Boot Camp
github.com/gadenbuie/usf-boot-camp-R

Ambient Intelligence Applications in Healthcare
2015-02-06
ISERC at IIE Annual Conference & Expo
garrickadenbuie.com/talk/iie-iserc-2015/
Garrick Aden-Buie, A. Yalcin, Ph.D., C. VandeWeerd, Ph.D., N. Agu, J. Hammett, E. Yetisener, C. Radwan

Reporting Reproducible Research with R and Markdown
2014-04-11
INFORMS@USF Code & Data Boot Camp
github.com/gadenbuie/usf-boot-camp-R

Boosted Tree Ensembles for Predicting Postsurgical ICU Mortality
2013-10-07
INFORMS Annual Meeting
garrickadenbuie.com/talk/informs-2013/
Garrick Aden-Buie, Y. Chen, G. Romero, R. Kayal, H. Yang Ph.D.

PROJECTS

Open Source Contributions

I enjoy contributing to open source software projects and have made modest contributions to the following packages: `pandoc` (LaTeX), `knitr` (R), `xaringan` (R), `magick` (R), `tibbletime` (R), `blogdown` (R). I also have released the following packages on GitHub:

- xaringanthemer: pkg.garrickadenbuie.com/xaringanthemer
- regexplain: github.com/gadenbuie/regexplain
- ggpomological: github.com/gadenbuie/ggpomological
- MCTestAnalysis: github.com/gadenbuie/MCTestAnalysis