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
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(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

FAMILIAR
- JavaScript
- Julia
- Go

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

INTERESTS

- Data Journalism
- Music
- Guitar
- Soccer
- Writing
- Reading

EDUCATION

University of South Florida
Ph.D., Industrial and Management Systems Engineering , GPA: 3.95

2014 — 2018

- Deep Learning
- Statistical Design Models
- Large-Scale Optimization
- Advanced Analytics
- Bayesian Data Analysis

University of South Florida
MSIE, Industrial and Management Systems Engineering , GPA: 4.00

2012 — 2014

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

2005 — 2006

Lehigh University
B.S. Applied Math, B.A. Spanish, Physics (minor) , GPA: 3.51

2002 — 2007

PROFESSIONAL EXPERIENCE

Project Coordinator and Research Associate
University of South Florida

Jan 2018
Sep 2014

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
University of South Florida

Mar 2017
Jul 2016

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
University of South Florida

Sep 2014
Sep 2013

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

Research Assistant
Patel College of Global Sustainability, USF

Sep 2013
Jun 2012

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.

Musician and Private Tutor
Self-employed
Chicago, IL and St. Petersburg, FL

Sep 2013
Sep 2009

- Booked, promoted and performed 5-10 shows per month while writing and recording original music
- Performed on local radio stations, including Tampa's WMNF
- Worked one-on-one with 7 students in Math and Spanish, resulting in an average grade increase of 17%. Averate duration for tutoring sesssions were between 6 weeks to a full semester for each student.

Youth Development Specialist
Peace Corps
Gualaceo, Ecuador

Aug 2009
Jun 2008

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.

Sales Administrator
Interplex Plastics

Jun 2008
Sep 2007

Restructured a previously fragmented position, consolidating roles and responsibilities to improve the processing of all sales orders.

- Successfully improved on-time delivery from 87%-98% for crucial client.
- Responsible for order processing and control; monitored shipping and generated invoices.
- Collaborated with various departments to coordinate machine scheduling, price quotations and revisions to meet customer and supplier needs while maintaining profit margins.

VOLUNTEER EXPERIENCE

INFORMS Student Chapter at USF
President

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.

INFORMS Student Chapter at USF
Newsletter Editor

2013 — 2014

Served as Newsletter Editor of the USF student chapter of INFORMS. Led planning and coordination committee for annual Code & Data Bootcamp.

- Redesigned the chapter's bi-annual newsletter in Adobe InDesign.
- 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.

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

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

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). I also have released the following packages on GitHub:

- ggpomological: github.com/gadenbuie/ggpomological
- MCTestAnalysis: github.com/gadenbuie/MCTestAnalysis