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

INTERESTS

Data Journalism
Music
Guitar
Soccer
Writing
Reading

EDUCATION

University of South Florida
2014 — 2018
Ph.D., Industrial and Management Systems Engineering , GPA: 3.95
Courses: Deep Learning, Statistical Design Models, Large-Scale Optimization, Advanced Analytics, Bayesian Data Analysis

University of South Florida
2012 — 2014
MSIE, Industrial and Management Systems Engineering , GPA: 4.00

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) , GPA: 3.51

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.

Musician and Private Tutor

<div align="right">Sep 2013
Sep 2009</div>

Self-employed

Chicago, IL and St. Petersburg, FL

- 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

<div align="right">Aug 2009
Jun 2008</div>

Peace Corps

Gualaceo, Ecuador

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

<div align="right">Jun 2008
Sep 2007</div>

Interplex Plastics

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

<div align="right">2014 — 2015</div>

President

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

<div align="right">2013 — 2014</div>

Newsletter Editor

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

<div align="right">2015</div>

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

<div align="right">2015</div>

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
Sixth Annual First Year Engineering Experience Conference
J. Gaines, Ph.D., B. Joseph, Ph.D., Garrick Aden-Buie

2014

Are multiple-choice questions suitable for a final examination in a STEM course?
American Society for Engineering Education
Garrick Aden-Buie, A. Kaw, Ph.D., A. Yalcin, Ph.D., R. Pendyala, Ph.D.

2014

PRESENTATIONS

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

2018-01-23

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

2017-10-25

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

2016-03-25

Ambient Intelligence Applications in Healthcare
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

2015-02-06

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

2014-04-11

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

2013-10-07

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:

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