MARTIN J FRIGAARD

R Programmer | Shiny Developer | University Instructor

https://www.linkedin.com/in/mjfrigaard/ • https://github.com/mjfrigaard • https://mjfrigaard.github.io/

Experience

Paradigm Data Group, LLC

Co-founder, Data Scientist   04/2019 - Present

Data science solutions and training

- Provide data analytic solutions and application development from **Posit certified instructors** for 10+ clients
- Deliver custom trainings on data management, analysis, visualization, Shiny application development
- View example workshop: **https://mjfrigaard.github.io/ph-lacounty-r/**
- View example application: **https://chicodatascience.shinyapps.io/CFO_SOW_Dashboard_FFY22-24/**

Atorus Research

Data Visualization Engineer   12/2022 - 11/2023

Atorus provides open-source clinical data science solutions.

- Technical lead for 10+ Quantitative Decision Making (QDM) Shiny applications and R packages using **Posit Connect**
- Developed and delivered training materials for advanced Shiny applications and R packages with **Posit Workbench** and **Posit Cloud**
- Created methods for developing internal R packages containing Shiny applications
- View example training materials: **https://mjfrigaard.github.io/dev-test-shiny/**

BioMarin

Senior Clinical Programmer   09/2020 - 12/2022

BioMarin develops therapeutics for life-threatening rare genetic diseases.

- Designed and deployed Shiny applications for Centralized Statistical Monitoring (CSM) group
- Created internal R packages for streamlining CSM Shiny application development
- Delivered 15+ training materials covering R programming, data processing, visualizations, and developing Shiny applications using **Posit Workbench** and **Posit Cloud**
- View example training materials: **https://mjfrigaard.github.io/bmrn-tutorials/**
- View example application: **https://mjfrigaard.github.io/dfdiffs/**

California State University, Chico

Instructor   08/2021 - 12/2022

Journalism 301 (Data Journalism) is an upper-level 16-week data visualization, critical thinking and research course

- Designed course syllabus, lecture content, and assignments
- View previous course website: **https://mjfrigaard.github.io/FA22-JOUR301/**

Quesgen

Shiny App Developer   07/2018 - 10/2020

Lead developer for the Diabetes Technology Society's (DTS) Blood Glucose Monitor Surveillance Program

- The application displays a 3-dimensional interpretation of the risk based on 200+ experts in diabetes care
- View application: **https://www.diabetestechnology.org/seg/**

Storybench

Author (Data Journalism in R)   08/2016 - 06/2020

Storybench is a blog featuring digital storytelling tips, tricks, and takeaways from Northeastern University's School of Journalism.

- Developed and published the R/data science tutorials
- 2019 shortlist for GEN Data Journalism Website of the Year
- Communicated statistical methods to non-technical audiences
- View writing examples: **https://www.storybench.org/author/martinfri/**

Education

University of California, San Francisco

Clinical Research (Master's Degree)   2015 - 2017

California State University, Chico

Kinesiology (Master's Degree)   2009 - 2011

California State University, Chico

Exercise Physiology (B.Sc.)   2007 - 2009

Additional Experience

US Army
Combat Medic/Healthcare Specialist (NCO)

<div align="right">Operation Enduring Freedom
2001 - 2007</div>

- Administered emergency medical treatment
- Initialized stabilization, treatment, and triage
- Monitored patients vital signs during transportation
- Assisted with outpatient and inpatient care and treatment

Non-commissioned officer responsibilities
- 1) assisting with outpatient care and supervision of facilities under the supervision of a physician or physician's assistant
- 2) establishing priorities for medical trainings
- 3) providing guidance, training, and supervision to subordinates

Skills

Statistics · Epidemiology · Research · Data Management · Data Visualization · Data Analysis · Data Models · Software Documentation · Functional Requirements · Technical Requirements · Public Speaking · Written Communication · Technical Writing · Problem Solving

Technological Expertise

R

Shiny App Development

Data Visualization

GitHub (Enterprise)

SQL programming

Python

Software

Shiny App Package (shinyap)
https://mjfrigaard.github.io/shinyap/

Support package for Shiny App-Packages book
- Link to book: https://mjfrigaard.github.io/shiny-app-pkgs/
- Contains 30+ application demos of the full application development cycle (modules, tests, documentation, etc.)
- Demonstrates popular Shiny frameworks (golem, leprechaun, and rhino) and novel functions for detecting R packages vs. Shiny app-packages

USDA/SNAP/CalFresh Outreach Dashboard
https://chicodatascience.shinyapps.io/CFO_SOW_Dashboard_FFY22-24/

Web application for monitoring USDA/SNAP grant progress
- Integrated data for 20+ subcontractors throughout the state of California
- Users can view overall performance metrics by county, take notes with Markdown, and download a customized PDF or Word report

Good Enough R Practices (gerp)
https://mjfrigaard.github.io/gerp/

R package designed to help new users organize data science/journalism projects
- Implementation of 10 best practices as documented in 'Good enough practices in scientific computing'
- Contains 15+ functions for quickly creating new data projects (folders structure, file names, etc.)

Surveillance Error Grid (Shiny App)
https://www.diabetestechnology.org/seg/

The Surveillance Error Grid (SEG) is a graphical tool for clinical risk assessments of blood glucose monitor errors.
- The application assigns a unique risk score to each blood glucose monitor data point when compared to a reference value based on input from 200+ diabetes clinicians.

Selected talks, books, and publications

R/Pharma workshop
Developing & Testing Your Shiny Application

<div align="right">2023</div>

https://mjfrigaard.github.io/dev-test-shiny/
Workshop materials for R/Pharma presentation that covers developing a Shiny application as an R Package (with a focus on writing efficient tests).

Selected talks, books, and publications

Shiny App-Packages: Getting your Shiny app into an R package   2022 - Present
https://mjfrigaard.github.io/shiny-app-pkgs/
An open field manual for developing Shiny applications as R packages.

Clinical Journal of the American Society of Nephrology   2020
Screening for CKD To Improve Processes of Care among Nondiabetic Veterans with Hypertension

Carmen A. Peralta, Martin Frigaard, Leticia Rolon, Karen Seal, Delphine Tuot, Josh Senyak, Lowell Lo, Neil Powe, Rebecca Scherzer, Shirley Chao, Phillip Chiao, Kimberly Lui, Michael G. Shlipak, and Anna D. Rubinsky

Pragmatic, cluster-randomized trial to evaluate feasibility and preliminary effectiveness of screening for chronic kidney disease (CKD). **DOI: 10.2215/CJN.05050419**

Ojo-publico   2020
Treating Covid-19: When enthusiasm trumps evidence

Martin Frigaard & Aleszu Bajak

https://ojo-publico.com/1903/treating-covid-19-when-enthusiasm-trumps-evidence
A report on several drugs being used to treat COVID-19 in Latin America. Covers side effects, adverse reactions, new clinical trials, current clinical evidence, and interviews from doctors in Peru, Brazil and the United States.

Awards

Army Commendation Medal (ARCOM)

Army Good Conduct Medal

University Dean's List

Achievements

Military service
Proud to serve as a medic in the Army Reserve during Operation Enduring Freedom

Tenacity & persistence
Self-taught programmer (R, SQL, & Python)

Constant self-improvement
I seek input and welcome feedback on my work and performance

References

Vadim Tantsyura | Sr. Director, Data Quality Science and Programming | BioMarin

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Aleszu Bajak | Director of Data Visualization | Urban Institute

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