# MARTIN JAMES FRIGAARD

## R programmer, Shiny app developer, Tidyverse instructor

**EXPERIENCE** 

## Senior Clinical Programmer

#### BioMarin

**1** 09/2020

**♀** Remote

BioMarin focuses on developing first-in-class and best-in-class therapeutics that provide meaningful advances to patients who live with serious and life-threatening rare genetic diseases.

- Created <u>training materials</u> for centralized statistical monitoring group that cover R programming, data wrangling and visualization (<u>example</u>)
- Designed and deployed shiny applications for centralized statistical monitoring (CSM) group
- Created <u>R package</u> for streamlining shiny application development (currently in development)

### University Instructor (part-time)

### California State University, Chico

I currently teach Journalism 301 (Data Journalism) at California State University, Chico:

- Designed and taught 16-week data visualization and critical thinking and research course; created assignments and provided individualized feedback
- · Course website

### Co-founder, Data Scientist

Data science solutions and training

- We provide data analytic solutions (data wrangling, analysis, visualizations, application development, and trainings) from RStudio certified instructors
- We also develop applications and dashboards (see examples below in ONGOING PROJECTS)

### Author - Data Journalism in R

## Storybench.org

🛗 08/2016 - Ongoing

 ${\boldsymbol{\mathscr{O}}}\ \, \text{http://www.storybench.org/author/martinfri/}$ 

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

- Develop R/data science tutorials for non-technical audiences
- · 2019 shortlist for GEN Data Journalism Website of the Year
- · Share and collaborate with journalists on data-related projects
- · Provide statistical expertise to non-technical audiences

#### Shiny App Developer

## Quesgen (private contract)

## 2018 - Ongoing

I developed a <u>Shiny application</u> for the Diabetes Technology Society's (DTS) Blood Glucose Monitor Surveillance Program

- Regularly implement feature requests from users
- Continually provide updates to ensure application functions optimally
- Example feature request: http://bit.ly/Example-Shiny-Feature

## Research Data Analyst

## University of California, San Francisco

Public Health Data Initiative

- Work with investigators to develop complex SQL queries against Clarity and other relational databases
- Design and maintain multi-table relational database(s) to store, monitor, update, and query integrated clinical and geocoded data
- Work closely with statisticians to analyze the data in R and Stata

#### TECHNOLOGICAL EXPERTISE

Data Visualization

Shiny

Unix

SQL

Python

#### **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)



### My communication skills

I welcome feedback and seek input on my writing (manuscripts, tutorials, code, etc)

### STRENGTHS



### Leadership & teamwork

Being a noncommissioned officer in the Army taught me the importance of professionalism and teamwork (and to lead by example)



## Discipline & consistency

Staying active and exercising consistently to keep up with my daughter requires putting in the work, even if I don't want to. I apply the same principle to my craft-I make it a point to write code *almost* daily.

## AWARDS



Army Commendation Medal (ARCOM)

#### Research Associate

#### Northern California Institute for Research and Education

Kidney Health Research Collaborative

- · Assisted with the preparation of IRB applications, including protocols, informed consent documentation, and obtaining approvals to conduct the
- · Created clinical study documents that align with trial protocols, including but not limited to, database documentation and guidelines, monitoring visit templates, and lab order reports
- Maintained database of subject information and generated reports for Primary Investigator and study staff

### **Science Writer**

### Lerner Media Global (LMG)

LMG report's objectively and offers balanced evidence-based analysis

- My writing responsibilities included independently researching science and health topics for six sections in The Worldmark Encyclopedia of Global Health
- · Write for non-technical audiences while under tight deadlines
- · Example writings available upon request

### Research Scientist

### Center for Nutrition and Activity Promotion

Now the Center for Healthy Communities (CHC), this is a local non-profit aimed at providing research-based nutrition, physical activity, and policy changes to support community health.

- Responsible for the selection and application of appropriate evaluation methods, techniques, practices, and procedures
- Oversaw the work of four interns by establishing priorities, coordinating activities, and resolving related work problems
- Responsible for communicating assignments, projects, deadlines and timeframes for completion to my team
- Designed and implemented instruments for data collection and evaluation information

### **University Lecturer**

California State University, Chico

**1** 09/2009 - 04/2012 9 Chico

Kinesiology department

- · I developed curriculum for two undergraduate courses in the department of Kinesiology: Physical Activity Epidemiology, and Principles of Strength and Conditioning
- I taught a one-semester section of the graduate statistics course (Statistical Methods in Kinesiology)
- · Helped to bridge the gap between theoretical knowledge in exercise science, and it's clinical and practical applications

### **EDUCATION**

#### MAS in Clinical Research

University of California, San Francisco **2015 - 2017** 

MA in Kinesiology

California State University, Chico **2009 - 2011** 

BS Exercise Physiology

California State University, Chico **2007 - 2009** 

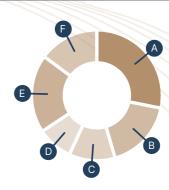
#### **AWARDS**

Army Good Conduct Medal



University Dean's List

#### MY TIME



- Reading & writing code
- Continuing education in statistics, machine learning, science, etc.
- Communicating with clients
- Building things (not on a computer)
- Family
- Sleep & recovery

### **SELECTED TALKS & PUBLICATIONS**

## Data Visualization with ggplot2

Open Data Science Conference (ODSC) -West

### Frigaard, Martin

**₩** 04/2022

ttps://odsc.com/speakers/data-visualization-with-

This workshop covered how to manipulate and structure data for visualizations, graph elements, and their associated terminology, how to select the appropriate graph based on the data, and how to avoid common graphing mistakes. Attendees also learned how to customize data visualizations and give them the 'personal touches' that make them memorable to the audience.

- Medium Post
- Materials

## goodenuffR: everything in it's right place

R package designed to help new users organize data science/journalism projects

- Implementation of best practices documented in 'Good enough practices in scientific computing
- Slide deck on how to use package and functions
- · Link to current version

## Center for Healthy Communities/CalFresh Outreach Dashboard

Web application for monitoring grant progress

- Integrated data for over 20 subcontractors throughout the state of California
- This Shiny application allows users to view overall performance, and relevant metrics by individual county
- Take notes using the Markdown text box, and then download a customized report as a PDF or Word document
- **Development version**

#### Cannabis Sales Dashboard

Shiny application showing cannabis sales data

**CanDash** is a week-over-week sales dashboard for visualizing cannabis product sales across states and regions

## sheetcheatR: digital RStudio cheatsheets (in development)

## 06/2022 - Ongoing Remote

A digital, browser-based version of **RStudio's cheat sheets** 

- Package website
- View example
- · Covers additional topics such as: command-line skills, atomic vectors, S3 vectors, and rectangular data

#### CERTIFICATIONS

### Tidyverse Train-the-trainer Certificate

RStudio (2019)

#### REFERENCES

Aleszu Bajak - Senior Data Reporter | USA Today

Email: aleszu.bajak@gmail.com Phone: (216) 644 - 1952

Stephanie Bianco - Director, Center for Healthy Communities | Associate Professor, Department of Nutrition and Food Science

Email: sbianco@csuchico.edu Phone: 530-898-4022

#### SELECTED TALKS & PUBLICATIONS

## Treating Covid-19: When enthusiasm trumps evidence

#### Ojo-publico

Martin Frigaard & Aleszu Bajak

**#** 06/2020

https://ojo-publico.com/1903/treating-covid-19when-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.

## Validating laboratory defined chronic kidney disease in the electronic health record for patients in primary care

#### **BMC** Nephrology

Martin Frigaard, Anna Rubinsky, Lo Lowell, Anna Malkina, Leah Karliner, Michael Kohn and Carmen A Peralta

₩ 2019

https://bmcnephrol.biomedcentral.com/articles/10 .1186/s12882-018-1156-2

Electronic health record data investigation into chronic kidnev disease diagnoses.

## Implementation of a pragmatic randomized trial of screening for chronic kidney disease to improve care among non-diabetic hypertensive veterans

### **BMC Nephrology**

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

https://bmcnephrol.biomedcentral.com/articles/10 .1186/s12882-017-0541-6

Pragmatic trial using electronic health record to screen chronic kidney disease patients.

## Identifying Red Flags: Using Anthropometry Measures to Screen for Elevated Blood Pressure Risk in Children

#### Childhood Obesity and Nutrition

Martin Frigaard, Keiko Goto, Cindy Wolff, Stephanie Bianco-Simeral, & Thomas Fahey

https://journals.sagepub.com/doi/abs/10.1177/194 1406412470719

Investigation into associations between blood pressure and obesity in adolescents.