A TECHNICAL INTRODUCTION TO DATA SCIENCE AND HEALTH DISPARITIES

Opportunity for peer-led, cohort-based groups to engage in practical hands-on training.

This learning research community is a 10-week series of asynchronous technical lectures and synchronous workshops to introduce health disparity researchers to data science through practical, hands-on training. Lectures will introduce fundamental principles and techniques of data science in order to extract useful information and knowledge from data. In parallel to lectures, workshop participants will also learn how to explore data, define cohorts and build participant-level datasets using the All of Us Researcher Workbench. Participants will also learn how to write reproducible and modular code with R, including programming best practices.

DATES

Sept 6 - Nov 15, 2022

REGISTRATION

rcmi-cc.org/training/

CONTACT

rcmi-cc.org/contact/

Please include "A Technical Introduction to Data Science and Health Disparities" in Message

SCHEDULE

Week	Lectures	Workshops
1	Introduction to data science and health disparities seminar	Introduction to R and RStudio
2	Introduction to Classification: "What can we allow similarity and difference to do for us?"	Project Management With RStudio/ Seeking Help/ Writing Good Software
3	Model Evaluation: "How can I see myself in the data or an extension of it?"	Data Structures
4	Classification Tasks- Nearest Neighbors: "Why we appreciate similar Netflix recommendations"	Exploring Data Frames / Subsetting Data
5	Class Probability Estimation: "How can we understand what might happen? "	Control Flow
6	Logistic Regression: "How can I understand the application of mathematical complexity?"	Functions Explained
7	Generalization & Evaluation: "How, where, and why assumptions matter"	Creating Publication-Quality Graphics with ggplot2
8	Fitting & Overfitting: "Is it a fit? Or does it just look good"	Splitting and Combining Data Frames with plyr
9	Ranking v Classifying: "Why it matters and who it matters to"	Producing Reports With knitr
10	Case Study: Topic TBD	Interactive visualizations with Shiny

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