

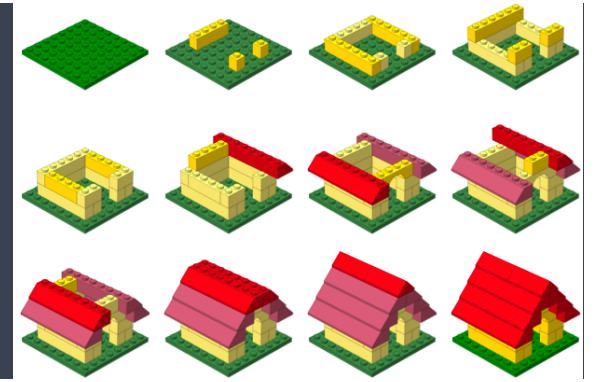
Introduction to R

Harvard Chan Bioinformatics Core

<https://tinyurl.com/hbc-r-online>

Sponsored by DF/HCC, CFAR, and HMS Foundry

Learning Objectives




- ✓ Comfortably use RStudio (a graphical interface for R)
- ✓ Fluently interact with R using RStudio
- ✓ Become familiar with R syntax
- ✓ Understand data structures in R
- ✓ Inspect and manipulate data structures
- ✓ Install packages and use functions in R
- ✓ Visualize data using *ggplot2*
- ✓ Utilize pipes, tibbles and functions from the Tidyverse package suite

Exit survey

<https://tinyurl.com/r-workshop-hbc>

Harvard Catalyst Online Resource

<https://projects.iq.harvard.edu/hcatrresource>

 HARVARD UNIVERSITY

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Harvard Catalyst Introduction to R:

An online, hands-on training resource for learning the basics of R

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HARVARD CATALYST

Harvard Clinical & Translational Science Center

HOME Lessons Faculty Supplemental Resources

Welcome to Introduction to R

This **online, hands-on learning resource** will introduce you to using R and RStudio. R is a simple programming environment that enables the effective handling of data, while providing excellent graphical support. RStudio is a tool that provides a user-friendly environment for working with R. This resource is intended to provide both basic R programming knowledge and information on utilizing R to increase efficiency in data analysis.

This comprehensive online learning resource was created in collaboration between [Harvard Catalyst](#) and the [Harvard Chan Bioinformatics Core](#). It includes a series of videos explaining fundamental concepts in R and demonstrates the application through live coding. It is geared toward those interested in learning the basics of R for reproducible data wrangling and visualizations (ggplot2), and/or performing data analyses that require a basic knowledge of R.

Resource lessons address the following:

- **R syntax:** Understanding the different 'parts of speech' in R, and introducing variables and functions, demonstrating how functions work, and modifying arguments for specific use cases.
- **Data structures in R:** Explaining the classes of data structures and the types of data used by R.
- **Data inspection and wrangling:** Reading in data from files, and using indices and various functions to subset and create datasets (including the tidyverse suite of packages).
- **Visualizing data:** Visualizing data using plotting functions from the external package ggplot2.
- **Exporting data and graphics:** Generating new data tables and plots for use outside of the R



Data Management

- HMS Data management -

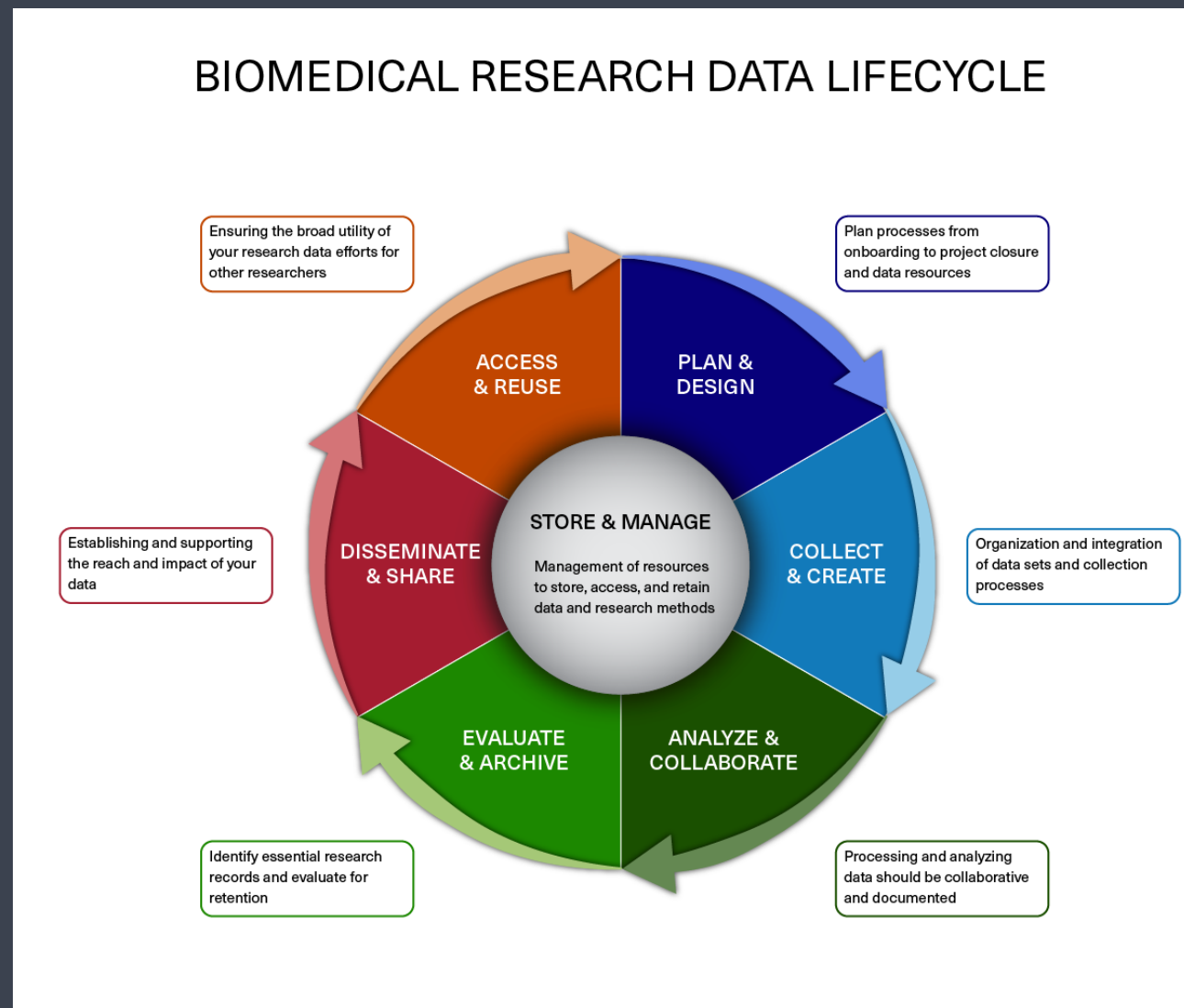
Webpage: <https://datamanagement.hms.harvard.edu/>

[Click here to sign up for data management related emails](#)

- Harvard-wide Research Data Management -

<https://researchdatamanagement.harvard.edu/>

Data Management Short Workshops




<https://datamanagement.hms.harvard.edu/about/news-events/rdmwg-calendar>


Data Management Short Workshops

Fall 2023 Data Lifecycle Training

Plan & Design

September 19 

Managing Research
Data Efficiently

October 4 

Onboarding: Procedures
for Research Consistency

October 17 

Research Management with
Open Science Framework


October 31 

Data Horror Stories:
Avoid the Nightmare


November 7 

Writing a Data Management
Plan with DMPTool


Collect & Analyze

September 6 


Intro to O2

September 20 

O2 Portal: Simplifying the
Interaction & Experience of
Using an HPC Environment

September 27 

Intro to MATLAB

October 18 

Optimizing O2 Jobs


November 8 

Intro to Python


December 13 

Data Cleaning with
OpenRefine

Store & Evaluate

September 26 


Introduction to the
General Records Schedule

October 10 


Managing Your
Paper Records

October 11 

The When, Where, and
How of Data Storage


December 5 

Managing Your
Electronic Records


December 6 

Keeping Data Safe
and Secure


Share & Publish

September 20 


Publication Perfect I

September 27 


Making Code and Software
Open: Connecting GitHub
and Harvard Dataverse

October 18 



Publication Perfect II

November 15 

Securely Managing and
Publishing Sensitive Data

November 15 

Rmarkdown:
Reproducible Reports

 In-person
 Virtual



Learn More & Register: bit.ly/rdmwg-calendar



<https://datamanagement.hms.harvard.edu/about/news-events/rdmwg-calendar>

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