

Introduction to R

Harvard Chan Bioinformatics Core

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

Sponsored by DF/HCC, HSCI, 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

Harvard Catalyst Online Resource

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


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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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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



Exit survey

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

Interested in additional training?

All workshop materials are online: <https://hbctraining.github.io/main>

Upcoming relevant courses from our partners

Countway Libraries -

1. How and Where to Publish your Data (May 11th)
2. Research Data Management: Tips and Tools (May 18th)

HMS Research Computing -

Intro to RCBio	Wednesday, May 11, 2022
Intro to Python	Wednesday, May 18, 2022

Office hours

- Office hours for trainees
- Every other Wednesdays 11am - noon
- 4 x 30 minute slots available
- Next OH - May 11th
- Sign up form will be emailed to you

Get (stay) in touch with us!

Sign up for our mailing list:

<https://tinyurl.com/hbc-training-mailing-list>

Training email: hbctraining@hsph.harvard.edu

Consulting email: bioinformatics@hsph.harvard.edu

Twitter: [@bioinfocore](https://twitter.com/bioinfocore)