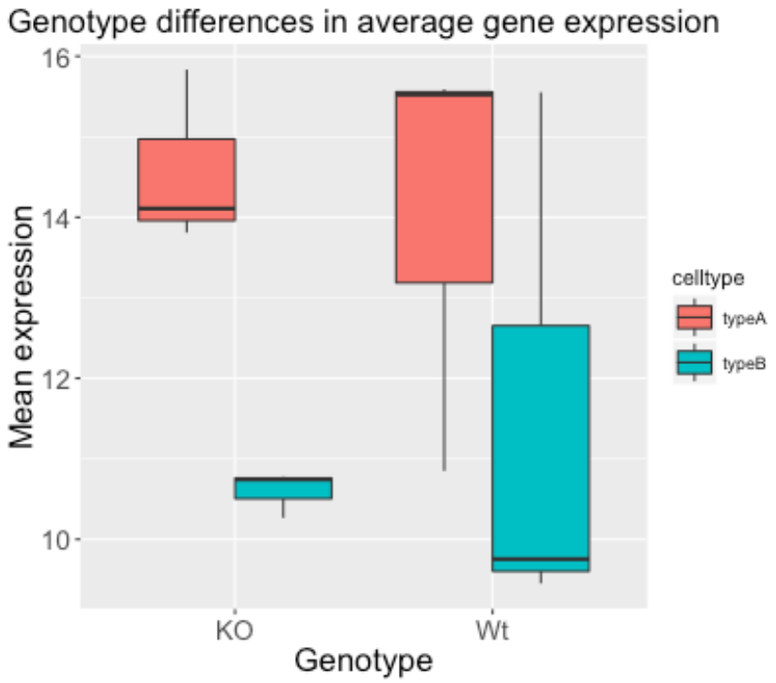


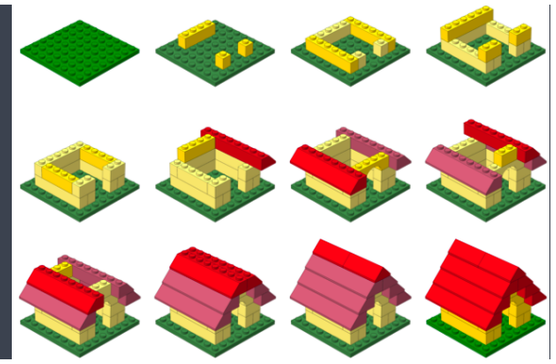
Introduction to R

Harvard Chan Bioinformatics Core

https://tinyurl.com/hbc-r-online-nanocourse

Sponsored by 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/exit-nano

Interested in additional training?

https://hbctraining.github.io/Training-modules/

Short workshops: Current Topics in Bioinformatics

These workshops are free and open to all researchers at Harvard University and affiliated institutions.

- **Workshops** on bioinformatics methods & related skills.
- Once a month for 3 hours
- Hands-on workshops - be prepared with your MAC or Windows computer
- **Free and open to everyone at Harvard University and its affiliates**
- Will meet the **first Wednesday of the month** (with one exception) **online via Zoom**
- **Sign up at the links below to receive the workshop Zoom link**

Interested in additional training?

https://hbctraining.github.io/Training-modules/

Summer-Fall 2022 Schedule (1pm - 4pm):

Topic and Link(s) to lessons	Prerequisites	Date	Registration
Basics of Python	None	8/10/2022	Closed
R practice exercises	Beginner R or Online R course - Harvard Catalyst	9/7/2022	Sign up!
Generating reports with Rmarkdown	Beginner R or Online R course - Harvard Catalyst	10/5/2022	Sign up!
Introduction to Shell	None	11/2/2022	Sign up!
Version control using Git/Github	Introduction to Shell	12/7/2022	Sign up!

Harvard Catalyst Online Resource

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

HARVARD UNIVERSITY HARVARD.EDU

Harvard Catalyst Introduction to R:
An online, hands-on training resource for learning the basics of R
Contact

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

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