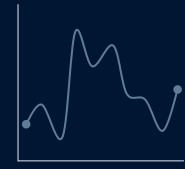
Introduction to R

Jasmine Xu & Wendy Geronimo





Link to demo: https://jasminex21.github.io/mlds_R/



What is R?

R is a popular programming language that is most primarily used for statistical computing and data visualization.

What differentiates R from other programming languages such as Python or Java is that R is a domain-specific language.

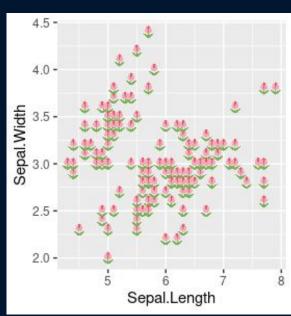
R Studio is the most popular IDE for R.



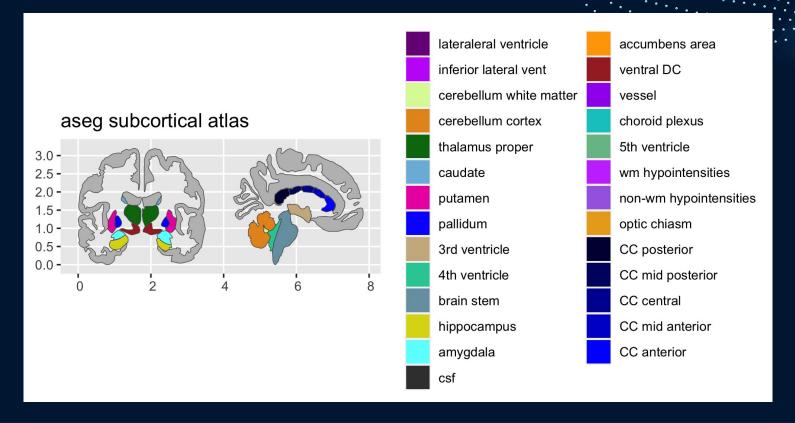
Why R?

Data scientists use R because of its vast expanse of comprehensive libraries, especially in statistics and data visualization.

Repo of ggplot extensions



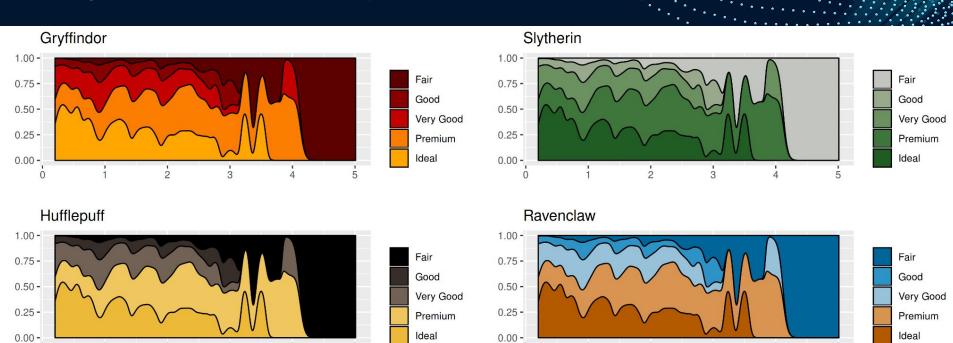
Another example: visualizing brain regions (source)



More examples: color palettes

source

Harry Potter-themed color palette



R Basics

[Demo]

Data Visualization

[Demo]

Data Visualization

Put simply, data visualization refers to the graphical representation of information and data.

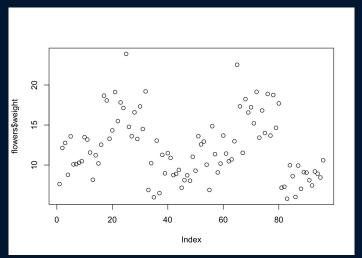


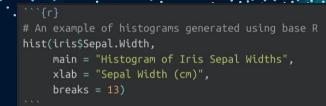
Data Visualization in R: base R

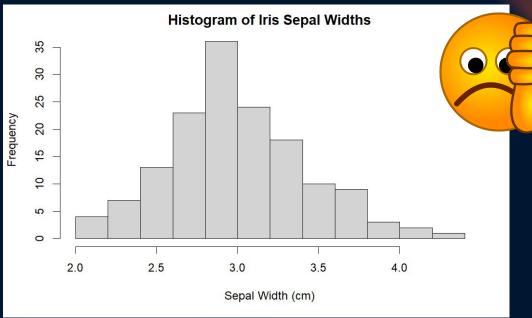
You can make simple, quick plots in base R (i.e. without installing external packages).

While this is fast and convenient, it isn't the

most visually appealing.







Data Visualization in R: ggplot

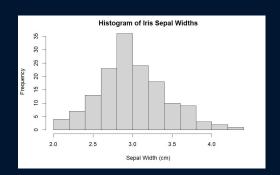
The most popular package for data visualization in R is

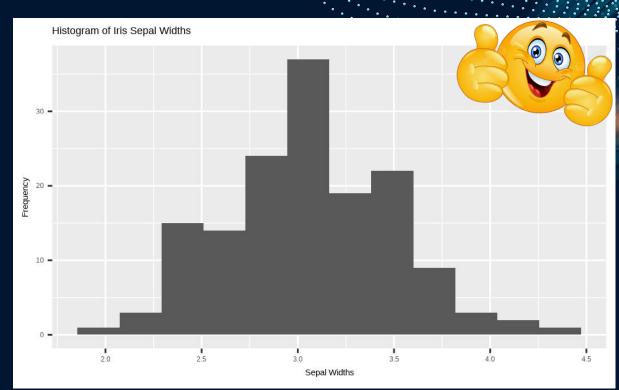
called ggplot.

More easily customizable

Has consistent naming conventions

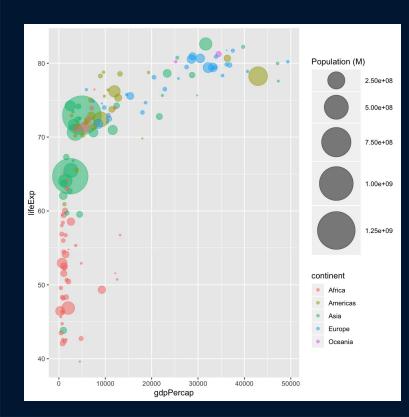
 Each type of visualization follows a general format



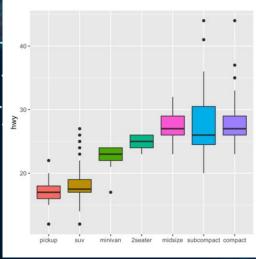


Other types of plots

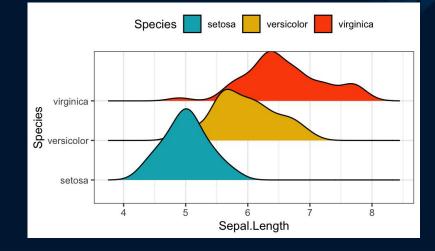
There are lots of other types of plots that ggplot supports!







Gallery

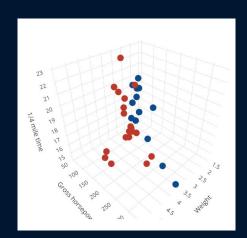


Other Data Visualization Packages

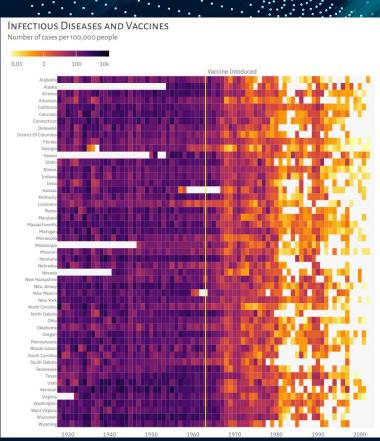
Ggplot isn't the only data visualization tool R provides!

For example:

- Plotly
- Highcharter
- Leaflet (maps)







Presenting Data with R Shiny

Plots are great, but you can make them better by making them interactive.

You can do this using R Shiny, a package that allows you to build web applications using R.

Simple Example: Old Faithful

Complex Example: Player Similarities



Thank you!

Questions?
Feel free to come up to us or DM us on Discord!