Intro to R

Plots part 1

Map

- Calendar

- Base R plots
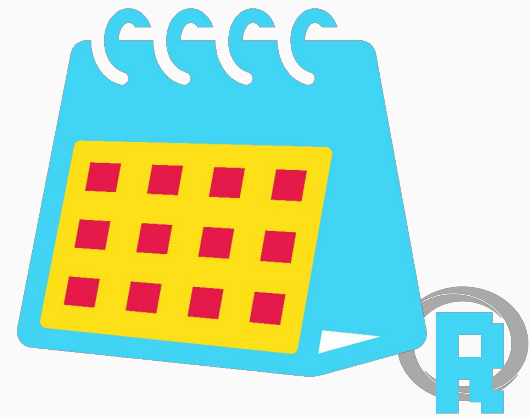
- What plot to use?

- Aesthetics

Calendar

Morning 1: Foundations of R & RStudio

Afternoon 1: R objects (Classes and Data Structures)

Morning 2: Files and subsetting data

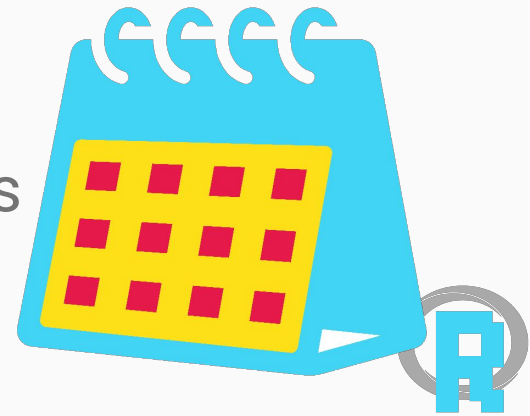Afternoon 2: Handy R tips and tricks

Calendar pt2

Morning 3: Visualisation (Line graphs & histograms)

Afternoon 3: Visualisation (Scatter plots and boxplots)
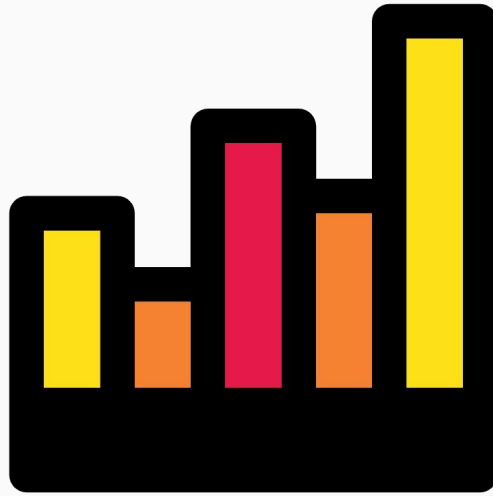
Morning 4: Basic statistics

Afternoon 4: Loops, ifs, and custom functions
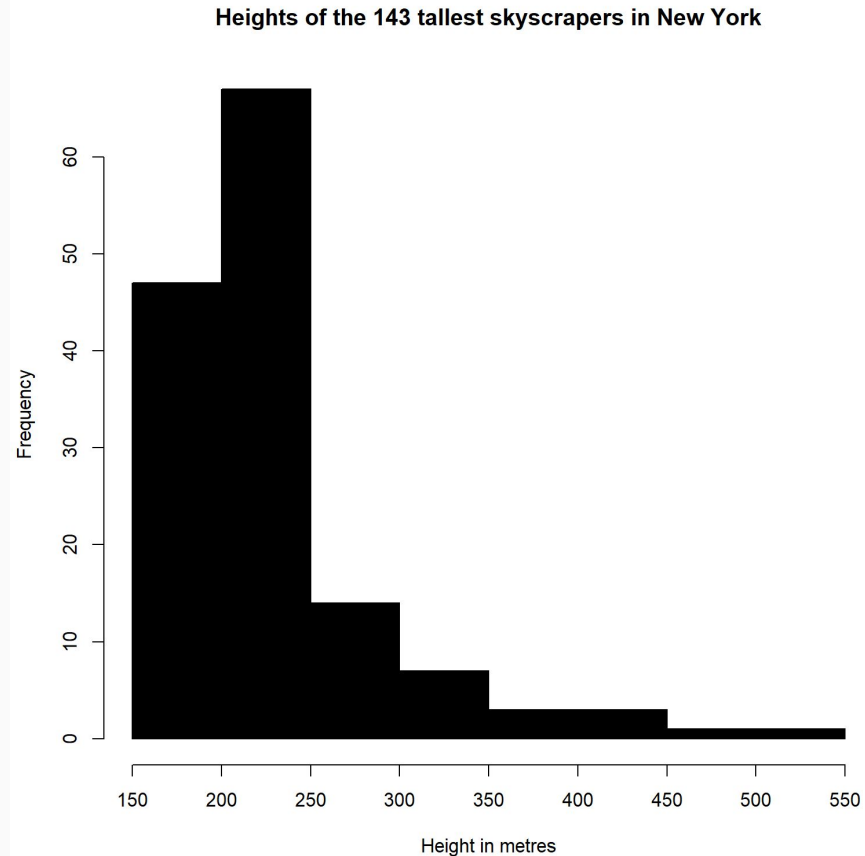
Plots

Histograms

Line graphs

Histogram

Counts in bins

Distribution of data

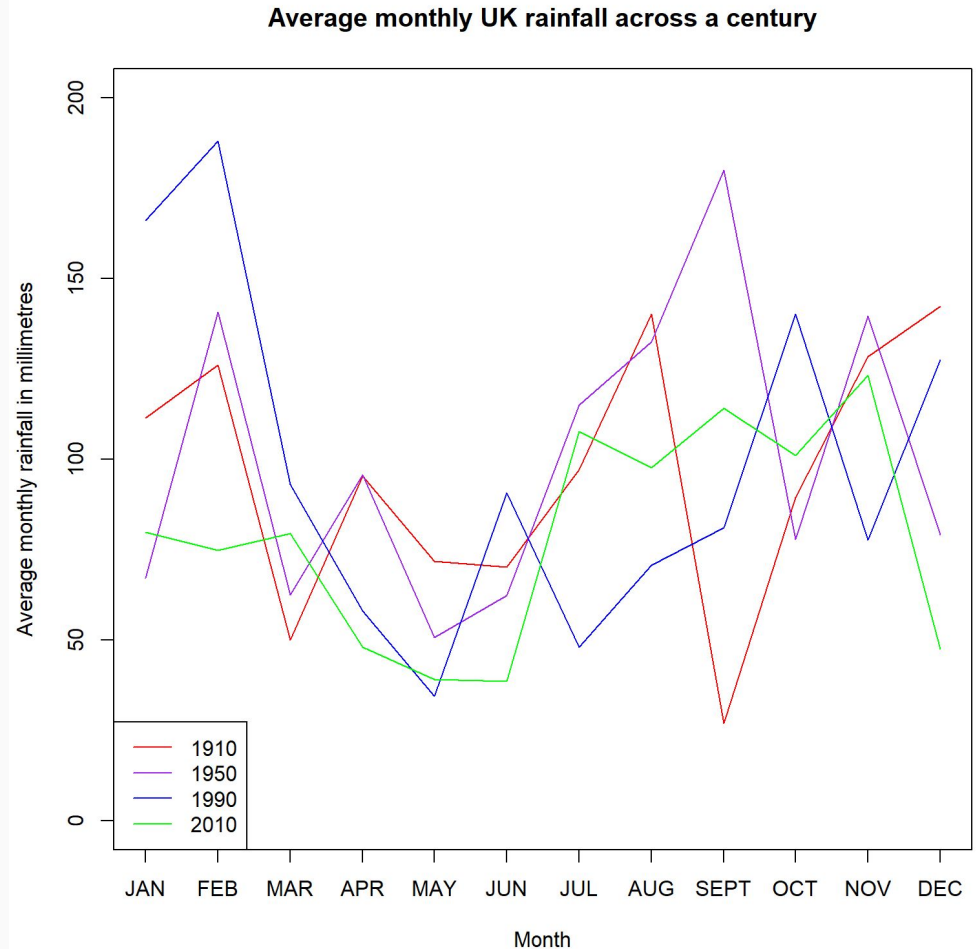Where are value concentrated?

Gaps?

Extremes?

Heights of the 143 tallest skyscrapers in New York

https://en.wikipedia.org/wiki/List_of_tallest_buildings_in_New_York_City

Line graph

Numbers (y) over time (x)

Different lines over same time

Average monthly UK rainfall across a century

What plot to use?

https://datavizcatalogue.com/

https://r-graphics.org/

https://clauswilke.com/dataviz/

https://informationisbeautiful.net/
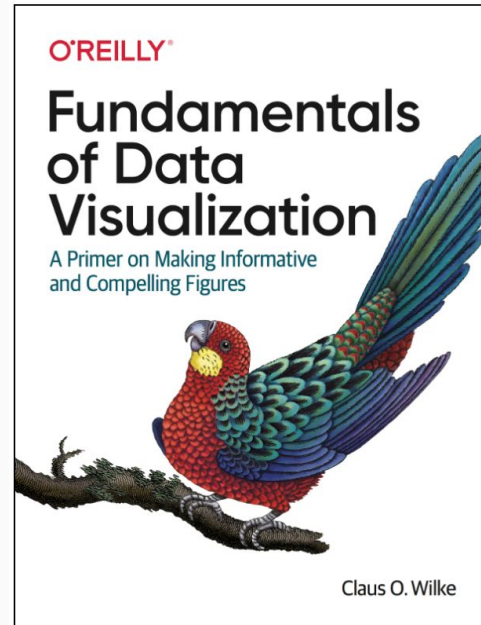
Commonly used plots

Look at plots others use

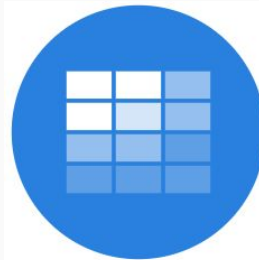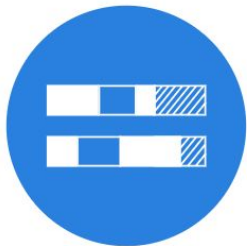Experiment

https://datavizcatalogue.com/
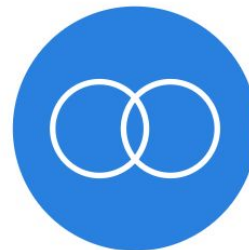

Bar Chart

Box & Whisker Plot

Heatmap

Stacked Area Graph
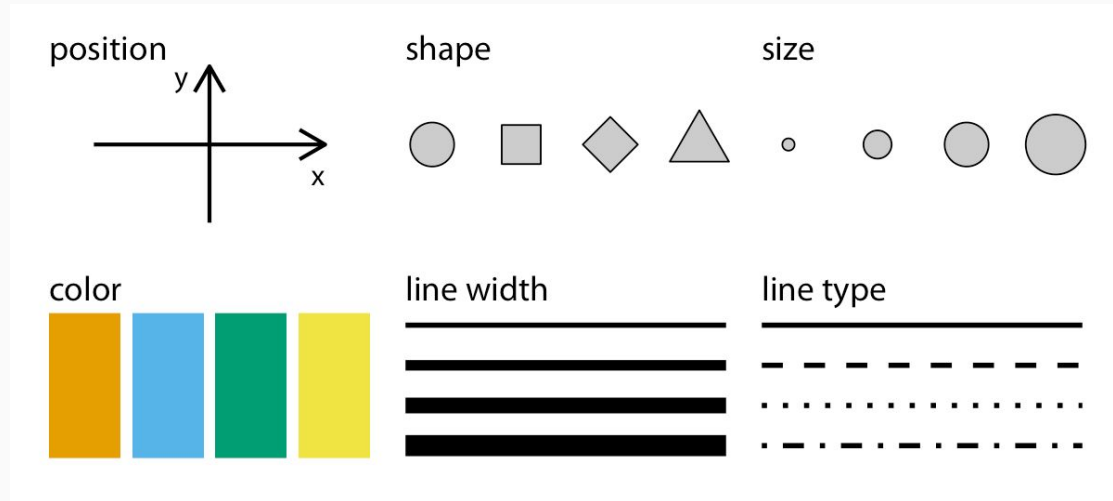
Stacked Bar Graph

Venn Diagram

Density Plot

Multi-set Bar Chart

Scatterplot

Plot aesthetics

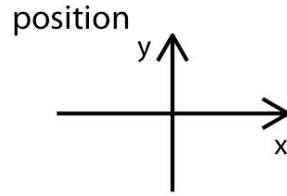What type of data for what type of aesthetic?

Continuous (values with intervals)

Discrete

position
shape
size

color
line width
line type

Continuous

- Continuous
  - Numerical (quantitative) data with intermediates
  - Height
  - Weight
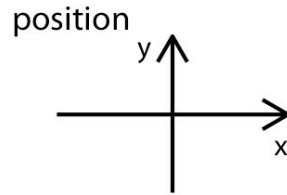 - Distance
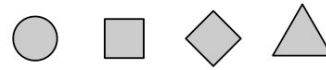 - Temperature
  - Time
  - Date

Discrete

- Discrete
  - Numerical (quantitative) data without intermediates
  - Number of people/buildings, oranges etc
  - Date
  - Time
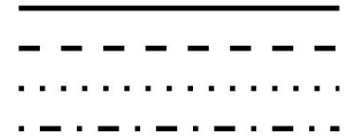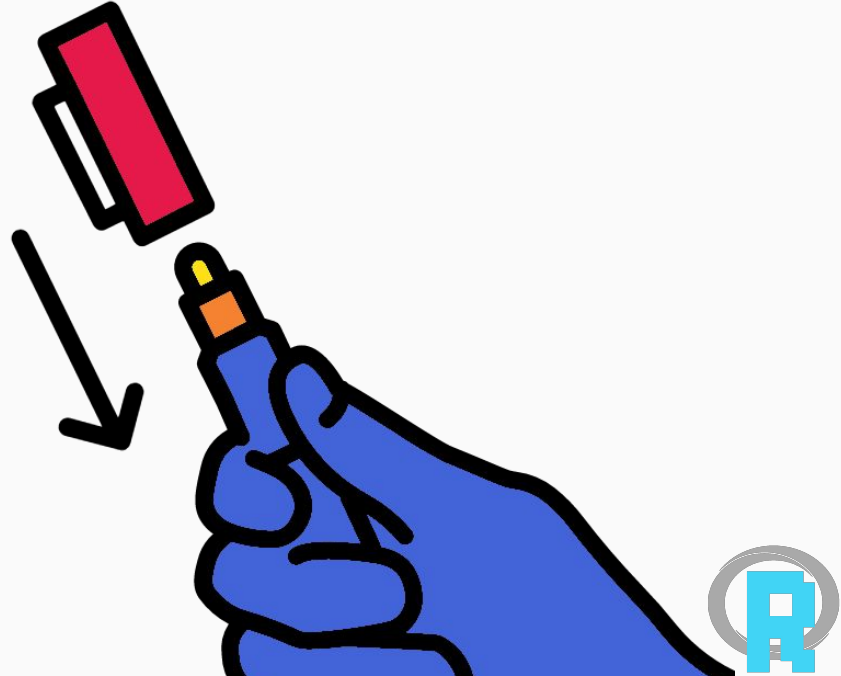 - Categorical (qualitative) data
  - Groups
  - Location

Recap

Calendar

Base R plots

What plot to use?

Aesthetics

Questions?