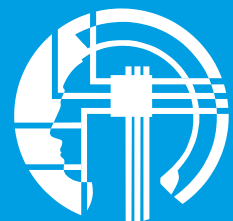# STATISTICAL ANALYSIS OF BEHAVIORAL DATA

05 OKTOBER, 2021

Max Planck Institute for Biological Cybernetics
Tübingen

Ahmad Ehyaei, Sara Ershadmanesh
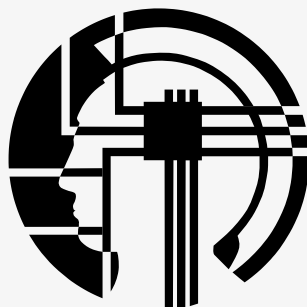
Contents

RMarkdown+Latex

This is simple an R Markdown document to show MPIThemes features. use # sign to define chapter. For definition sub chapter add ## to first line and add name of sub chapter.

Code Embedding

```
     speed           dist
 Min.   : 4.0   Min.   :  2.00
 1st Qu.:12.0   1st Qu.: 26.00
 Median :15.0   Median : 36.00
 Mean   :15.4   Mean   : 42.98
 3rd Qu.:19.0   3rd Qu.: 56.00
 Max.   :25.0   Max.   :120.00
```

We can run inline R code 2^10= 1024

Markdown

In RMarkdown we can use markdown syntax, such as unordered list items

- item
- item
  - more item

Or use block quotes are written after >, e.g.,

> To be, or not to be, that is the question!

Latex

We can easily write math expressions by latex syntax. Inline LateX equations can be written in a pair of dollar signs

$$f\left(k\right) = \binom{n}{k} p^k \left(1 - p\right)^{n-k}$$
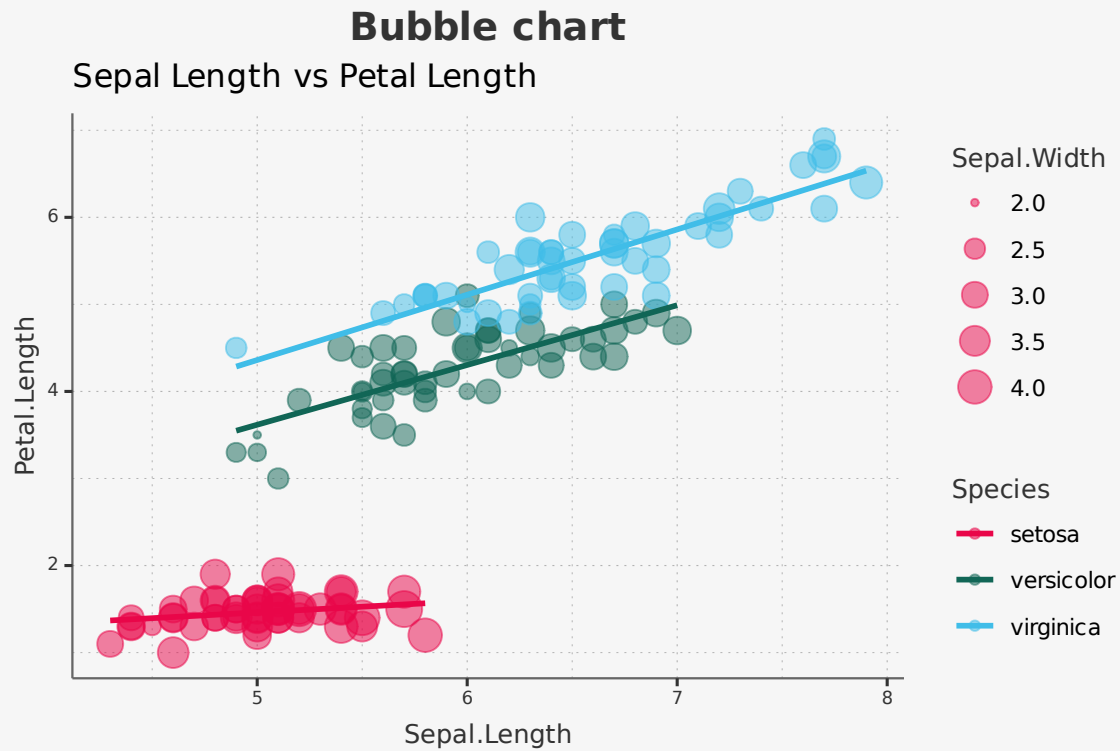
Plot

By using ggplot package, we can

```
ggplot(iris, aes(Sepal.Length, Petal.Length)) +
  labs(subtitle="Sepal Length vs Petal Length",
       title="Bubble chart") +
  geom_point(aes(color=Species, size=Sepal.Width),alpha = 0.5) +
  geom_smooth(aes(col=Species), method="lm", se=F)
```

Bubble chart

Sepal Length vs Petal Length

Block Environments

> **Think**
>
> Lorem Ipsum is simply dummy text of the printing and typesetting industry.

> Lorem Ipsum is simply dummy text of the printing and typesetting industry.

> **Theorem 0.1: Pythagorean theorem**
>
> his is a theorem about right triangles and can be summarised in the next equation
>
> $$x^2 + y^2 = z^2$$