

A very short introduction to R Markdown

Teaching assistants

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Why use R markdown

R Markdown is a tool that allows you to keep in a same document your code, your outputs (summaries, plots, etc) and, most importantly, your thoughts and comments. You can produce nicely formatted output in html, pdf or even Microsoft Word. It is extremely easy to use and will force you to document well what you are doing. We strongly encourage you to do your homeworks with it, but of course at the end of the day it is your choice if you prefer copy paste print screens onto Word documents.

Here is a website with more information: <http://rmarkdown.rstudio.com/index.html>

You can access R Markdown help from RStudio at any time by clicking on **Help -> Markdown Quick reference** or **Help -> Cheatsheets -> R Markdown Reference Guide**.

Get started

The easiest way to get started is to create a new R Markdown document from within RStudio: **File -> New File -> R Markdown**. Then enter the title, your name and select the type of output (if you don't have Latex installed on your computer select html). To produce the document, click on the button **Knit PDF** or **Knit HTML** at the top of the open tab. That's it!

The basics of text formatting

Formatting text with markdown is extremely easy, as you can see for yourself.

Headers

Simply use # character:

```
# Header 1
## Header 2
### Header 3
#### Header 4
```

Emphasis

```
*italic*
**bold**
```

Lists:

```
* item 1
  + subitem
* item 2

1. numbered item 1
2. numbered item 2
```

Equations:

Use latex type formulas:

inline:

x squared is x^2 .

x squared is x^2 .

Display:

```
$$  
x = 3 + 2  
$$
```

$$x = 3 + 2$$

R-code

The best part is to be able to insert R-code directly into your document. You just do it like this:

```
```r  
x <- rnorm(100)
```
```

If you want to compute something but hide it from the document, simply replace the above `{r}` by:

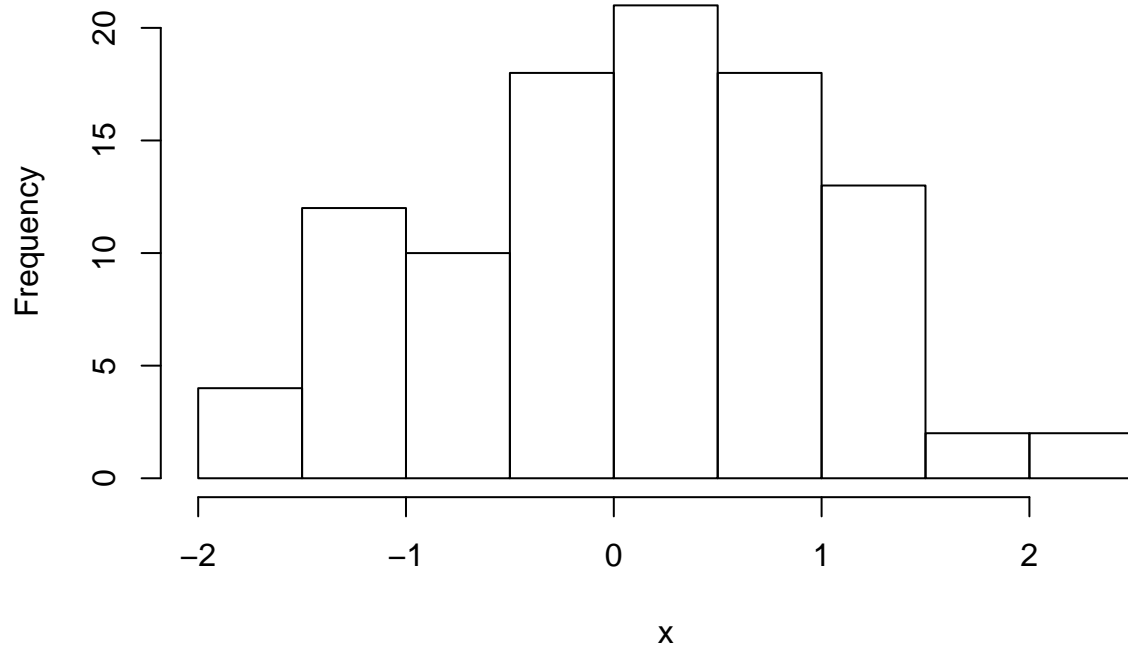
```
{r, echo=FALSE}
```

Figures

As the old adage goes, a picture is worth a thousand words. Don't be shy with figures, nothing is easier with R markdown, just produce a plot within a R chunk and it will insert the figure into your document:

```
hist(x)
```

Histogram of x



Going further

R Markdown is nice and easy to get started, but it has some limitations. For those of you who want to go further you can use `knitr` instead, which gives you the whole power of Latex and R in the same document: <http://yihui.name/knitr/>

Have fun!