

An introduction to R Markdown

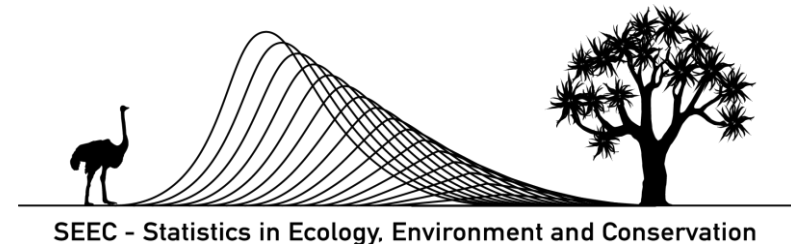
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**ENDANGERED
WILDLIFE TRUST**
Protecting forever, together.



What is Markdown?

- Simple, plain text formatting language (syntax)
- Designed to write HTML valid code without tags
- Goal of easy-to-read and easy-to-write
- Alternative to WYSIWYG editors
- Many Markdown language variations

Markdown vs HTML

This is a **bulleted list** with *several* important things:

- Item 1
- Item 2
- Item 3

This is a **bulleted list** with *several* important things:

- * Item 1
- * Item 2
- * Item 3

```
<p>This is a
<strong>bulleted
list</strong> with
<em>several</em> important
things:</p>
```

```
<ul>
<li>Item 1</li>
<li>Item 2</li>
<li>Item 3</li>
</ul>
```

What is R Markdown?



Embed R code
chunks in
Markdown
documents



Pandoc.org



R Markdown
(document format)



rmarkdown package

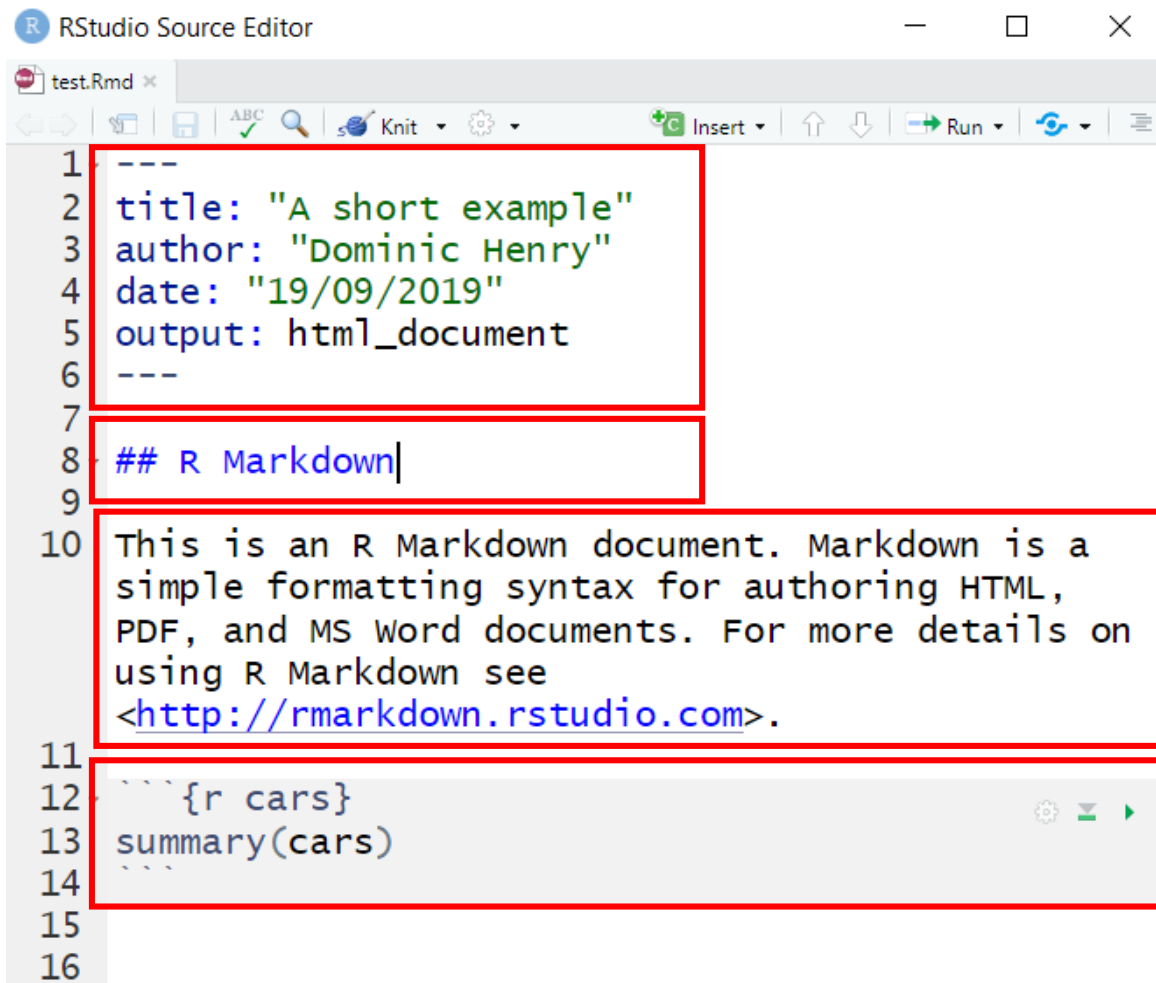


Developed in 2014 and has evolved into a comprehensive platform for authoring documents

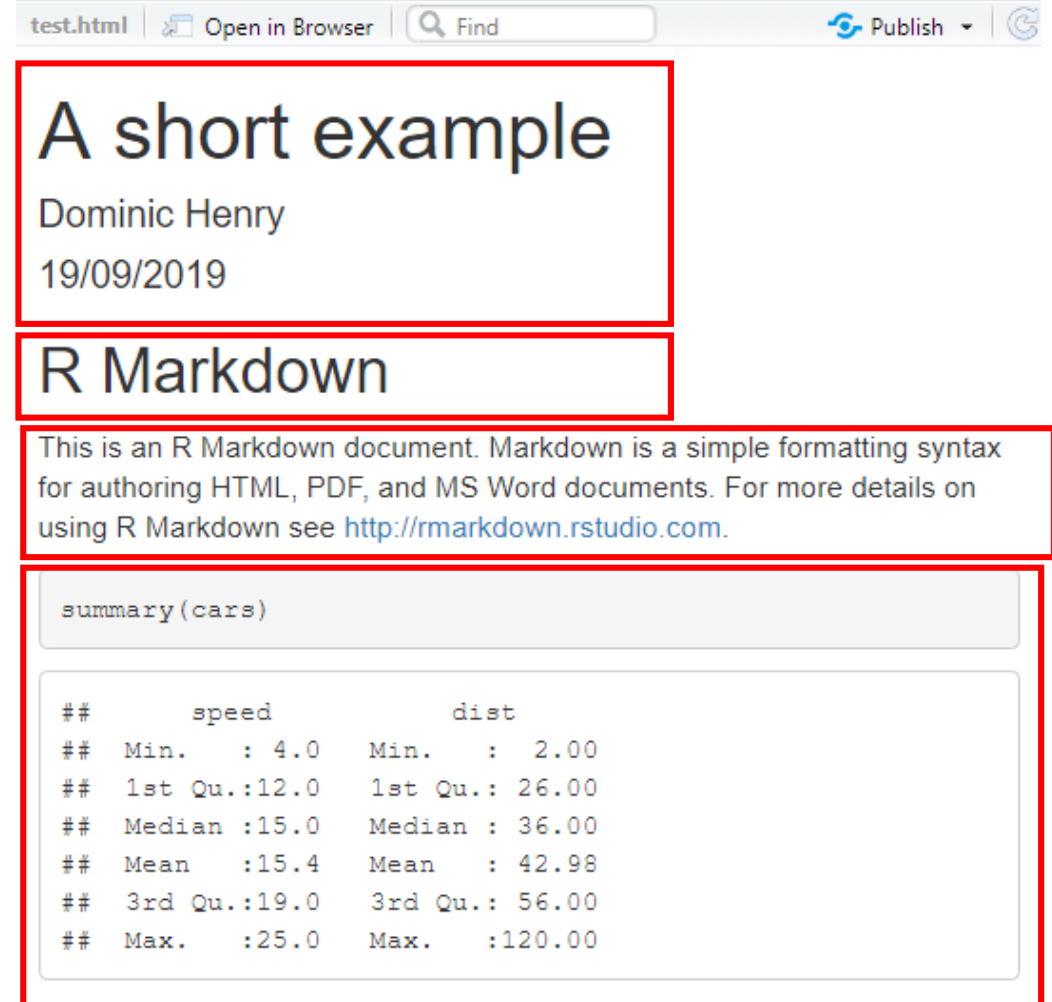
Uses:

- Compile a single R Markdown document to a report in different formats (PDF, Word, Powerpoint, etc.)
- Create notebooks in which code chunks can run interactively
- Build slide presentations (LaTeX Beamer, PowerPoint, ioslides).
- Build interactive apps (*shiny* package)
- Write journal articles and books (*bookdown* package)
- Create websites and blogs

Basic components of R Markdown doc



```
1 ---
2 title: "A short example"
3 author: "Dominic Henry"
4 date: "19/09/2019"
5 output: html_document
6 ---
7
8 ## R Markdown|
9
10 This is an R Markdown document. Markdown is a
11 simple formatting syntax for authoring HTML,
12 PDF, and MS word documents. For more details on
13 using R Markdown see
14 <http://rmarkdown.rstudio.com>.
15
16 {r cars}
17 summary(cars)
```



test.html Open in Browser Find Publish

A short example

Dominic Henry
19/09/2019

R Markdown

This is an R Markdown document. Markdown is a simple formatting syntax for authoring HTML, PDF, and MS Word documents. For more details on using R Markdown see <http://rmarkdown.rstudio.com>.

```
summary(cars)
```

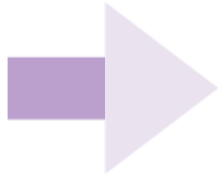
##	speed	dist
## Min.	: 4.0	Min. : 2.00
## 1st Qu.:	12.0	1st Qu.: 26.00
## Median :	15.0	Median : 36.00
## Mean :	15.4	Mean : 42.98
## 3rd Qu.:	19.0	3rd Qu.: 56.00
## Max.	: 25.0	Max. : 120.00

Benefits of using *rmarkdown* package

- Dynamic analysis documents that combine code, rendered outputs and narrative
- Interactive analysis within the RStudio IDE
- Reproduce, collaborate and share results
- Effectively communicate your results & render across platforms

Basic workflow

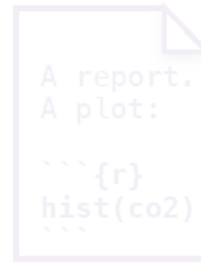
i. Open - Open a file that uses the .Rmd extension.



ii. Write - Write content with the easy to use R Markdown syntax



iii. Embed - Embed R code that creates output to include in the report



iv. Render - Replace R code with its output and transform the report into a slideshow, pdf, html or ms Word file.



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Demo

- Creating a template
- Conventions: text and chunks
- Graphics
- Publishing documents

Resources

- *The R Markdown Book* - <https://bookdown.org/yihui/rmarkdown/>
- [R markdown cheat sheet](#)
- Templates - <https://rmarkdown.rstudio.com/gallery.html>
- Rpubs - <https://rpubs.com/>
- RStudio Connect - <https://www.rstudio.com/products/connect/>
- Rstudio talks - <https://resources.rstudio.com/webinars>
- remedy package - <https://github.com/ThinkR-open/remedy>
- Custom themes - <https://prettydoc.statr.me/>
- rmdformats package - <https://github.com/juba/rmdformats>

Thank you



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<https://github.com/DomHenry>



@Dom__Henry