

RMarkdown

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(she,her,hers)
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Slides adapted from David Keyes (@dgkeyes), inspired by Danielle Navarro (@djnavarro) and Paul Campbell (@paulcampbell91)

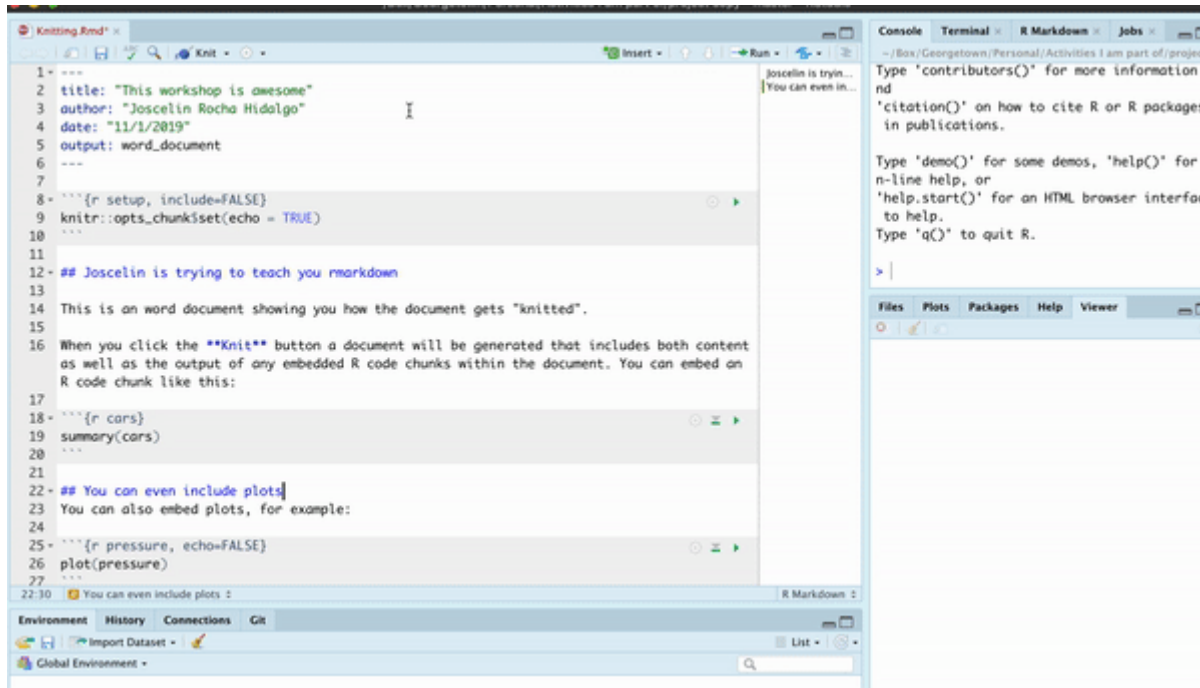
Art by @allison_horst

RMarkdown Overview

Every RMarkdown document has the following:

<pre>--- title: "My Super Fancy Report" author: "David Keyes" output: html_document ---</pre>	YAML
<pre>```{r setup, include=FALSE} knitr::opts_chunk\$set(echo = TRUE) ```</pre>	Code Chunk
<pre>## 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>. When you click the **Knit** button a document will be generated that includes both content as well as the output of any embedded R code chunks within the document. You can embed an R code chunk like this:</pre>	Text
<pre>```{r cars} summary(cars) ```</pre>	Code Chunk
<pre>## Including Plots You can also embed plots, for example:</pre>	Text
<pre>```{r pressure, echo=FALSE} plot(pressure) ```</pre>	Code Chunk

Knitting (aka Export)



YAML

```
1 ---  
2 title: "This workshop is awesome"  
3 author: "Joscelin Rocha Hidalgo"  
4 date: "07/18/2020"  
5 output: word_document  
6 ---  
7
```

Stands for "YAML Ain't Markup Language"

Where you add title, author, date, output options, etc.

Text

```
---  
title: "My Super Fancy Report"  
author: "David Keyes"  
output: html_document  
---
```

```
```{r setup, include=FALSE}  
knitr::opts_chunk$set(echo = TRUE)
```
```

R Markdown

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When you click the **Knit** button a document will be generated that includes both content as well as the output of any embedded R code chunks within the document. You can embed an R code chunk like this:

```
```{r cars}  
summary(cars)
```
```

Including Plots

You can also embed plots, for example:

```
```{r pressure, echo=FALSE}  
plot(pressure)
```
```

Text

Text

Text

Markdown

Text with **some words in bold**
and *some words in italics*

Output

Text with **some words in bold** and some
words in italics

Headers

Markdown

`# First-Level Header`

`## Second-Level Header`

`### Third-Level Subheader`

Output

First-Level Header

Second-Level Header

Third-Level Subheader

Lists

Markdown

- Bulleted list item
- Bulleted list item

1. Numbered list item
1. Numbered list item

Output

- Bulleted list item #1
- Bulleted list item #2

1. Numbered list item #1
2. Numbered list item #2

Your Turn

1. Create a new RMarkdown file, setting the default output format as Word.
2. Save your RMarkdown file as report.Rmd.
3. Go into the YAML and change the title to “My 2020 Report.”
4. Change the output format to HTML by changing `output: word_document` to `output: html_document`.
5. Add the following first-level header: "Introduction"

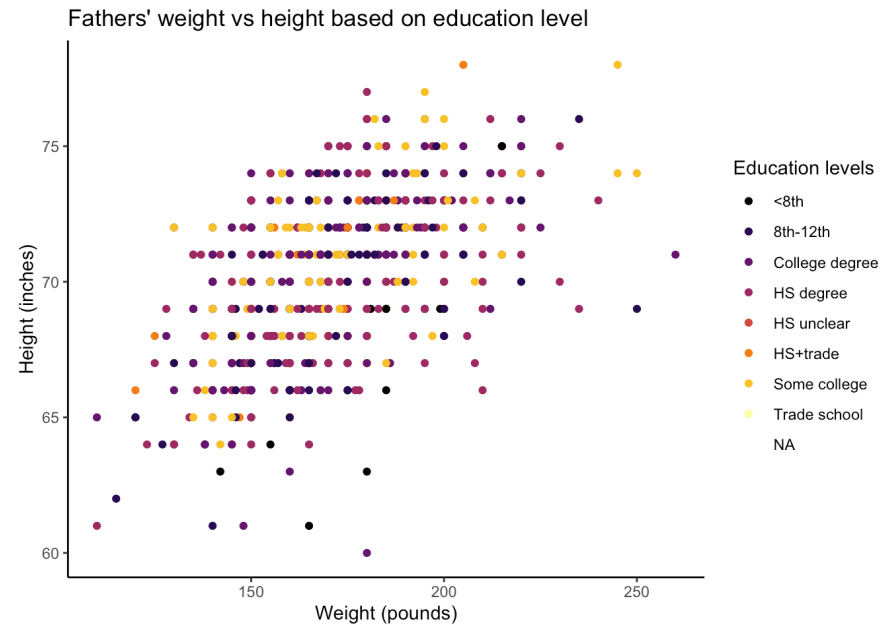
Your Turn

6. Add this text (note the bold and italics) below the introduction header: "My name is (write your name here). I am the most **amazing** human being. You've *never* met someone like me. Please hire me!"
7. Add the following second-level header: "Reasons Why I am the Best"
8. Add the following list of reasons:
 - Because I say so
 - Because it is true
 - Why would I lie?
9. Knit and reopen the report.html file to make sure your changes show up.

Code Chunk

They start with three backticks and {r} and end with three backticks.

```
154 ```{r}
155 ggplot(data,aes(dwt,dht, color = ded_lbls)) +
156   geom_point() + scale_color_viridis_d(option = "inferno") +
157   labs(title = "Fathers' weight vs height based on education level",
158        x = "Weight (pounds)",
159        y = "Height (inches)",
160        color = "Education levels") +
161   theme_classic()
162 ```
163
164
```



Insert a Code Chunk: Button

Insert a Code Chunk: Keyboard Shortcut



Windows

control+alt+i



Mac

command+option+i

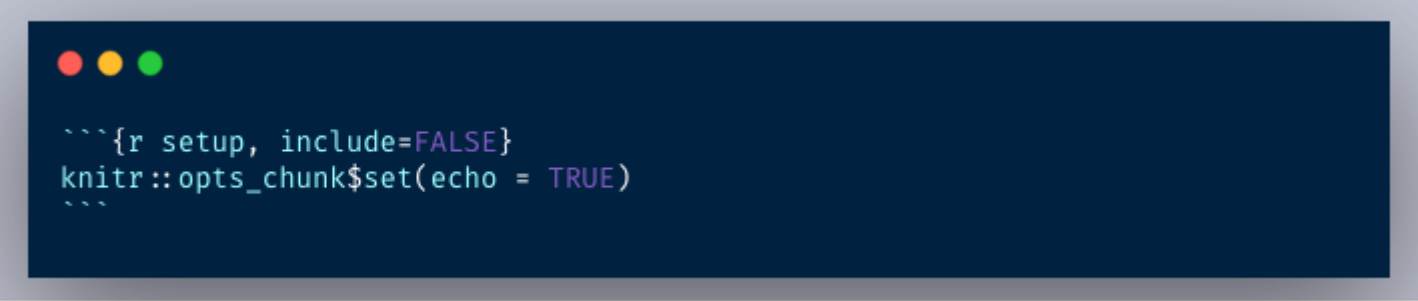
Chunk Options

Other options that we won't discuss today:

- **warning** (show any warnings that R throws)
- **message** (show any messages that R sends)
- **fig.width** (default figure width)
- **fig.height** (default figure height)
- **echo** (show the R code in the knitted report)
- and many more ...

Setup Code Chunk

A special code chunk with the text `setup` right after the `r`.



```
```${r setup, include=FALSE}  
knitr::opts_chunk$set(echo = TRUE)
```
```

All chunk options can be set at the **global level** (in the setup code chunk) or at the **chunk level** (for individual chunks).

Options at the individual chunk level **override** global chunk options.