rmarkdown

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Three ways to use rmarkdown

1. Reporting conclusions without going into the code
2. collaboration with others who might be interested in both the conclusions you draw and code behind.
3. lab notebook to record what you did and the thinking process behind

Basic parts of an rmarkdown document

1. Text with simple formatting

enclose with	example
* or _	*italics*
** or ___	**bold**
|nrow(mtcars)'	
^	10^2
~	log10

[Rmd cheatsheet][https://www.rstudio.com/wp-content/uploads/2016/03/rmarkdown-cheatsheet-2.0.pdf]

2. code chunk

    Add with one of the 3 ways:

- Cmd/Ctrl + Alt + I
- Insert button
- typing in chunk delimiter

```
print("I am the output of this code chunk.")
```

```
## [1] "I am the output of this code chunk."
```

```
ggplot(mtcars, aes(x = cyl, y = mpg)) +
  geom_point()
```

Be careful about caching + good for loading up computationally expensive output - not based on dependencies

```
data = mtcars[1:10, ]
```

```
proc = dplyr::filter(data, am == 1)
proc
```

```
##                mpg cyl disp  hp drat    wt  qsec vs am gear carb
## Mazda RX4     21.0   6  160 110 3.90 2.620 16.46  0  1    4    4
## Mazda RX4 Wag 21.0   6  160 110 3.90 2.875 17.02  0  1    4    4
```

Option	Run code	Show code	Output	Plots	Messages	Warnings
eval = FALSE	-		-	-	-	-
include = FALSE		-	-	-	-	-
echo = FALSE		-				
results = "hide"			-			
fig.show = "hide"				-		
message = FALSE					-	
warning = FALSE						-

Figure 1: chunk options

```
## Datsun 710     22.8   4  108  93 3.85 2.320 18.61  1  1    4    1
data = mtcars[11:20, ]
```

```
proc = dplyr::filter(data, am == 1)
proc
```

```
##                  mpg cyl disp hp drat    wt  qsec vs am gear carb
## Fiat 128        32.4   4 78.7 66 4.08 2.200 19.47  1  1    4    1
## Honda Civic     30.4   4 75.7 52 4.93 1.615 18.52  1  1    4    2
## Toyota Corolla 33.9    4 71.1 65 4.22 1.835 19.90  1  1    4    1
```

Global options defines default for every chunk

```
knitr::opts_chunk$set(echo = FALSE)
```

```
## Warning in mean.default(data): argument is not numeric or logical: returning NA
```

Inline code Example: There are a total of 10 diamonds in the dataset with an average weight of