

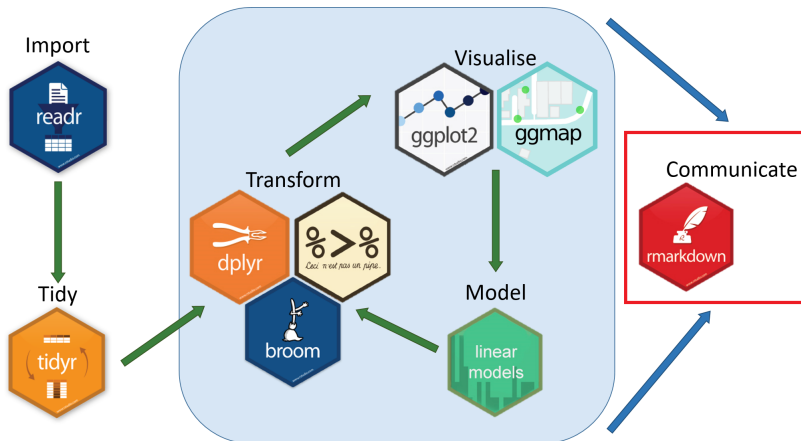
Presenting Your Analyses with R Markdown

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Presenting Your Results

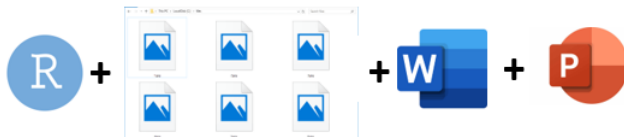


Presenting Your Results

Analysis contains:

- Code
- Tables
- Plots
- Notes

Everything in separate files



Presenting Your Results

R Markdown

Single file containing all pieces

The screenshot displays the RStudio interface with an R Markdown document titled 'Untitled.Rmd'. The left pane shows the source code, and the right pane shows the rendered output.

Source Code (Left Pane):

```
1 ---
2 title: "Untitled"
3 author: "Garrett"
4 date: "July 10, 2014"
5 output: html_document
6 runtime: shiny
7 ---
8
9 This R Markdown document is made interactive using Shiny. Unlike the more
10 traditional workflow of creating static reports, you can now create
11 documents that allow your readers to change the assumptions underlying
12 your analysis and see the results immediately.
13
14 ## Inputs and Outputs
15
16 You can embed Shiny inputs and outputs in your document. Outputs are
17 automatically updated whenever inputs change. This demonstrates how a
18 standard R plot can be made interactive by wrapping it in the Shiny
19 'renderPlot' function. The 'selectInput' and 'sliderInput' functions
20 create the input widgets used to drive the plot.
21
22 ```{r, echo=FALSE}
23 inputPanel(
24   selectInput("n_breaks", label = "Number of bins:",
25              choices = c(10, 20, 35, 50), selected = 20),
26   sliderInput("bw_adjust", label = "Bandwidth adjustment:",
27              min = 0.2, max = 2, value = 1, step = 0.2)
28 )
29
30 renderPlot({
```

Rendered Output (Right Pane):

Untitled
Garrett
July 10, 2014

This R Markdown document is made interactive using Shiny. Unlike the more traditional workflow of creating static reports, you can now create documents that allow your readers to change the assumptions underlying your analysis and see the results immediately.

To learn more, see [Interactive Documents](#).

Inputs and Outputs

You can embed Shiny inputs and outputs in your document. Outputs are automatically updated whenever inputs change. This demonstrates how a standard R plot can be made interactive by wrapping it in the Shiny `renderPlot` function. The `selectInput` and `sliderInput` functions create the input widgets used to drive the plot.

Number of bins: Bandwidth adjustment:

Geyser eruption duration

The plot shows a histogram of Geyser eruption durations with a density curve overlaid. The x-axis represents eruption duration (ranging from 1.5 to 5.0) and the y-axis represents density (ranging from 0.0 to 0.7). The histogram bars are white with black outlines, and the density curve is a solid blue line. The plot is titled 'Geyser eruption duration'.

Presenting Your Results

Can compile output file into many different formats



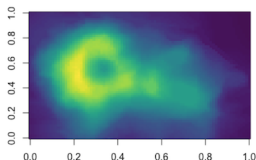
Can compile output file into many different formats

Viridis Demo

The code below demonstrates two color palettes in the `viridis` package. Each plot displays a contour map of the Maunga Whau volcano in Auckland, New Zealand.

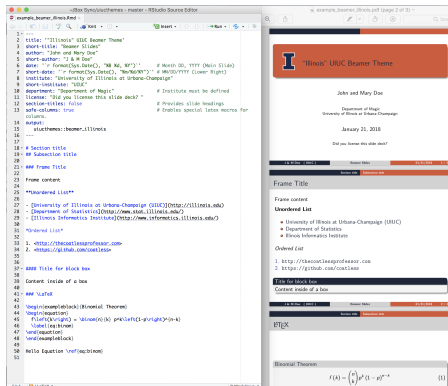
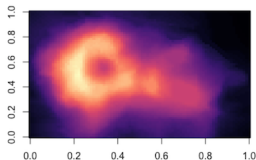
Viridis colors

```
image(volcano, col = viridis(200))
```

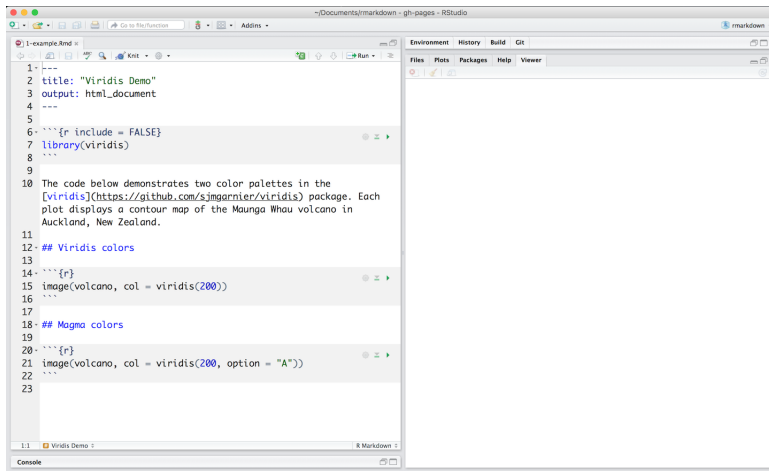


Magma colors

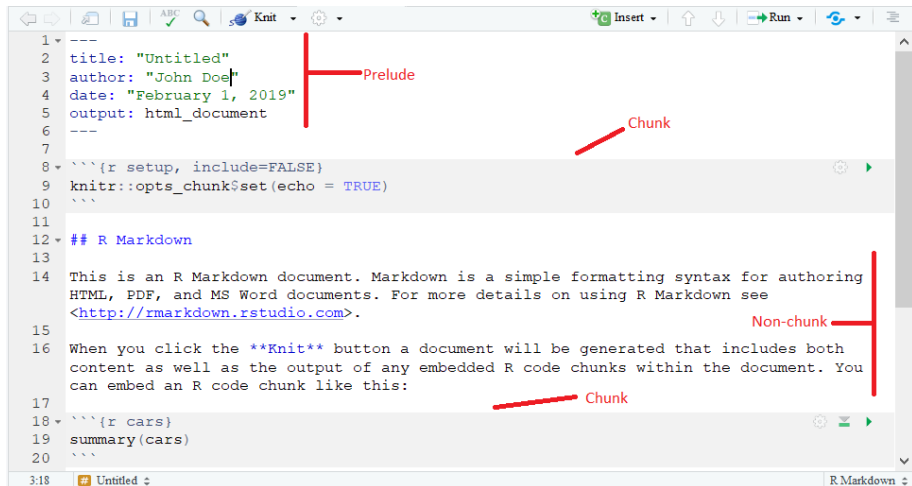
```
image(volcano, col = viridis(200, option = "A"))
```



R Markdown defined by "enhanced" script = **.RMD file**



Script Structure



The screenshot shows an R Markdown script editor with the following content and annotations:

```
1 ---
2 title: "Untitled"
3 author: "John Doe"
4 date: "February 1, 2019"
5 output: html_document
6 ---
7
8 ```{r setup, include=FALSE}
9 knitr::opts_chunk$set(echo = TRUE)
10 ```
11
12 ## R Markdown
13
14 This is an R Markdown document. Markdown is a simple formatting syntax for authoring
15 HTML, PDF, and MS Word documents. For more details on using R Markdown see
16 <http://rmarkdown.rstudio.com>.
17
18 When you click the Knit button a document will be generated that includes both
19 content as well as the output of any embedded R code chunks within the document. You
20 can embed an R code chunk like this:
21
22 ```{r cars}
23 summary(cars)
24 ```
```

Annotations in the image:

- Prelude:** A red vertical line and arrow pointing to the YAML header (lines 1-6).
- Chunk:** A red arrow pointing to the first R code chunk (lines 8-10).
- Non-chunk:** A red vertical line and arrow pointing to the text paragraph (lines 14-16).
- Chunk:** A red arrow pointing to the second R code chunk (lines 18-20).

The status bar at the bottom shows "3:18" and "Untitled". The bottom right corner of the editor shows "R Markdown".

Kable with Markdown

Publication Quality Tables

```
knitr::kable(  
  mtcars[1:6, 1:6], caption = 'A subset of mtcars.'  
)
```

	mpg	cyl	dis	hp	drat	wt
Mazda RX4	21.0	6	160	110	3.90	2.620
Mazda RX4 Wag	21.0	6	160	110	3.90	2.875
Datsun 710	22.8	4	108	93	3.85	2.320
Hornet 4 Drive	21.4	6	258	110	3.08	3.215
Hornet Sportabout	18.7	8	360	175	3.15	3.440
Valiant	18.1	6	225	105	2.76	3.460

A subset of mtcars.

2019 Women's World Cup Predictions

Soccer Power Index (SPI) ratings and chances of advancing for every team

TEAM	Team Rating				Chance of Finishing Group Stage In ...			Knockout Stage Chances				
	GROUP	SPI	OFF.	DEF.	1ST PLACE	2ND PLACE	3RD PLACE	MAKE ROUND OF 16	MAKE QTR-FINALS	MAKE SEMI-FINALS	MAKE FINAL	WIN WORLD CUP
USA 0 pts.	F	98.3	5.0	0.0	83%	17%	—	✓ 78%	47%	35%	24%	
France 0 pts.	A	96.3	4.5	0.0	>99%	<1%	<1%	✓ 78%	42%	36%	19%	
Germany 0 pts.	B	93.8	4.0	0.0	98%	2%	—	✓ 89%	48%	28%	12%	
Canada 0 pts.	E	93.5	3.7	0.0	39%	61%	—	✓ 59%	36%	28%	9%	
England 0 pts.	D	91.9	3.5	0.0	71%	29%	—	✓ 69%	43%	16%	8%	
Netherlands 0 pts.	E	92.7	3.9	0.0	61%	39%	—	✓ 59%	37%	19%	8%	
Australia 0 pts.	C	92.8	4.2	0.0	13%	54%	34%	>99%	54%	26%	16%	5%

Session Loads

Date	Week	Fwd/Bck	Position	Name	Total Distance	Mod Speed Dist	High Speed Dist	Percent Max Vel
Backs								
2018-02-06	Wk 32	Backs	Scrum Half	04fa3	4834	1248	219	0.91
2018-02-06	Wk 32	Forwards	Tighthead Prop	1202a	2561	297	16	0.77
2018-02-06	Wk 32	Backs	Wing	153b3	4879	1156	116	0.81
2018-02-06	Wk 32	Forwards	Hooker	1ec23	2673	294	43	0.89
2018-02-06	Wk 32	Backs	Full Back	27e4e	4659	1014	108	0.87
2018-02-06	Wk 32	Forwards	Back Row	405f7	2795	309	50	0.82
2018-02-06	Wk 32	Backs	Wing	40ec0	4610	846	115	0.86
2018-02-06	Wk 32	Backs	Full Back	44609	4656	1003	159	0.8
2018-02-06	Wk 32	Backs	Wing	45107	4160	683	60	0.78
2018-02-06	Wk 32	Forwards	Loosehead Prop	4bf62	2509	363	0	0.89
2018-02-06	Wk 32	Forwards	Back Row	604b2	2725	340	0	0.86
2018-02-06	Wk 32	Forwards	Second Row	6d345	2592	316	0	0.89
Forwards								
2018-02-06	Wk 32	Backs	Scrum Half	7590e	4205	745	43	0.77
2018-02-06	Wk 32	Backs	Fly Half	81c99	4561	1037	81	0.8
2018-02-06	Wk 32	Forwards	Back Row	a9898	2982	522	81	0.87

Song of the Session

Bad Boy by BIGBANG

Blue by BIGBANG

