

quarto

What is quarto?

- Open-source document format and computational notebook system.
- Integrates Markdown for text and code execution in R (and other languages!)
- Easily generate and re-generate a quarto document to produce a professional-looking document

Why not R Markdown?

Only because quarto is newer and more featured!

- Anything you already know how to do in R Markdown you can do in quarto, and more!¹
- All of these slides, website, etc. are all made in quarto.
- If you know and love R Markdown, by all means keep using it!

1. Slight caveat about a bug that we will see later...

Quarto basics

```
1 # My title
2
3 Some text
4
5 Some italic text
6
7 Some bold text
8
9
10 ```{r}
11 x <- 3
12 x
13 ```
```

Quarto basics

My title

Some text

Some *italic text*

Some **bold text**

```
1 x <- 3
2 x
```

```
[1] 3
```

Chunk options

Some of the ones I find myself using most often:

```
1  ```{r}
2  #| eval: false
3  #| error: true
4  #| cache: true
5  #| warning: false
6  #| message: false
7  x <- 3
8  ```
```

Also `echo` (can't include above because it conflicts with my slide options!)

Chunks can produce figures or tables

```
1 ```{r}
2 #| label: tbl-one
3 #| tbl-cap: "This is a great table"
4 knitr::kable(mtcars)
5 ```
```

Table 1: This is a great table

	mpg	cyl	disp	hp	drat	wt	qsec
Mazda RX4	21.0	6	160.0	110	3.90	2.620	16.46
Mazda RX4 Wag	21.0	6	160.0	110	3.90	2.875	17.02
Datsun 710	22.8	4	108.0	93	3.85	2.320	18.61
Hornet 4 Drive	21.4	6	258.0	110	3.08	3.215	19.44

	mpg	cyl	disp	hp	drat	wt	qsec
Hornet Sportabout	18.7	8	360.0	175	3.15	3.440	17.05
Valiant	18.1	6	225.0	105	2.76	3.460	20.21
Duster 360	14.3	8	360.0	245	3.21	3.570	15.84
Merc 240D	24.4	4	146.7	62	3.69	3.190	20.01
Merc 230	22.8	4	140.8	95	3.92	3.150	22.90
Merc 280	19.2	6	167.6	123	3.92	3.440	18.30
Merc 280C	17.8	6	167.6	123	3.92	3.440	18.90
Merc 450SE	16.4	8	275.8	180	3.07	4.070	17.40
Merc 450SL	17.3	8	275.8	180	3.07	3.730	17.60
Merc 450SLC	15.2	8	275.8	180	3.07	3.780	18.00

	mpg	cyl	disp	hp	drat	wt	qsec
Cadillac Fleetwood	10.4	8	472.0	205	2.93	5.250	17.98
Lincoln Continental	10.4	8	460.0	215	3.00	5.424	17.82
Chrysler Imperial	14.7	8	440.0	230	3.23	5.345	17.42
Fiat 128	32.4	4	78.7	66	4.08	2.200	19.44
Honda Civic	30.4	4	75.7	52	4.93	1.615	18.52
Toyota Corolla	33.9	4	71.1	65	4.22	1.835	19.90

	mpg	cyl	disp	hp	drat	wt	qsec
Toyota Corona	21.5	4	120.1	97	3.70	2.465	20.01
Dodge Challenger	15.5	8	318.0	150	2.76	3.520	16.87
AMC Javelin	15.2	8	304.0	150	3.15	3.435	17.30
Camaro Z28	13.3	8	350.0	245	3.73	3.840	15.41
Pontiac Firebird	19.2	8	400.0	175	3.08	3.845	17.05
Fiat X1-9	27.3	4	79.0	66	4.08	1.935	18.90
Porsche 914-2	26.0	4	120.3	91	4.43	2.140	16.70

	mpg	cyl	disp	hp	drat	wt	qsec
Lotus Europa	30.4	4	95.1	113	3.77	1.513	16.99
Ford Pantera L	15.8	8	351.0	264	4.22	3.170	14.50
Ferrari Dino	19.7	6	145.0	175	3.62	2.770	15.50
Maserati Bora	15.0	8	301.0	335	3.54	3.570	14.60
Volvo 142E	21.4	4	121.0	109	4.11	2.780	18.60

Chunks can produce figures or tables

```
1 ```{r}
2 #| label: fig-hist
3 #| fig-cap: "This is a histogram"
4 hist(rnorm(100))
5 ```
```

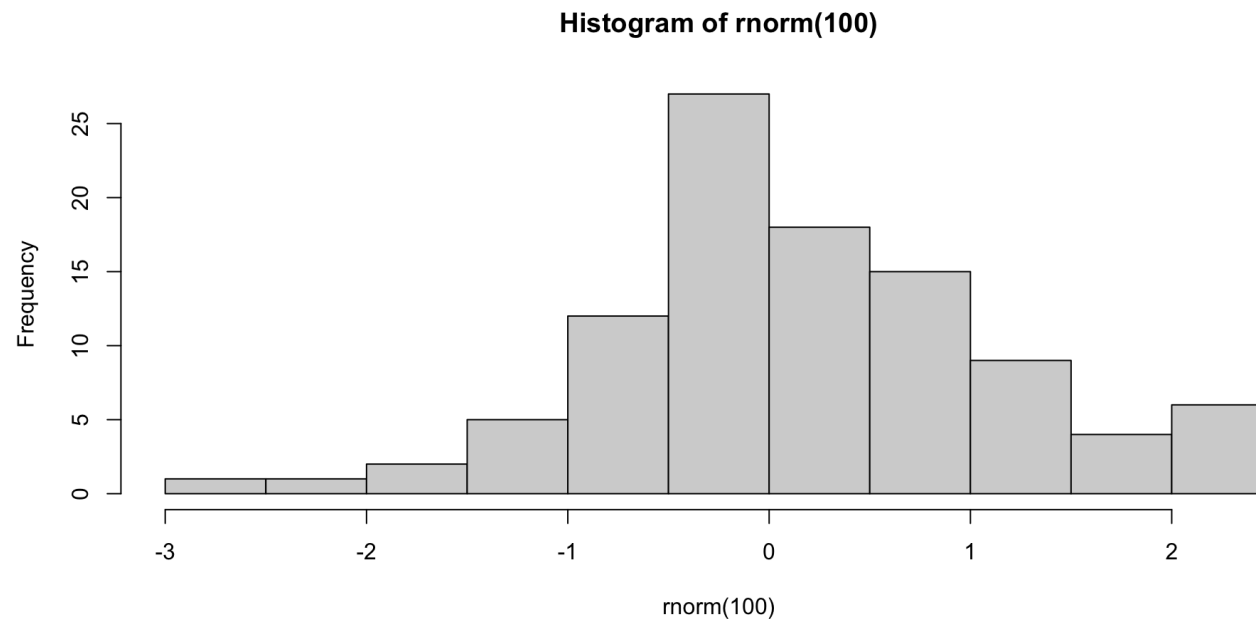


Figure 1: This is a histogram

Cross-referencing

You can then refer to those with `@tbl-one` and `@fig-hist` and the Table and Figure ordering will be correct (and linked)

```
@fig-hist contains a histogram and @tbl-one a table.
```

gets printed as:

Figure 1 contains a histogram and Table 1 a table.

Inline R

I often create a list of stats that I want to report in a manuscript:

```
1 stats <- list(n = nrow(data),  
2               mean_age = mean(data$age))
```

I can then print these numbers in the text with:

There were ``r stats$n`` participants with a mean age of ``r stats$mean_age``.

which turns into:

There were 1123 participants with a mean age of 43.5.

Conclusion

There are ~1 billion other features to know about quarto.

The [website](#) is an amazing resource.

Additional resources for R Markdown will have a lot of overlap

- [The Definitive Guide to R Markdown](#)
- [The R Markdown Cookbook](#)

