Communication with RMarkdown

Contents

What can RMarkdown be used for? 1

Key Resources 1

Write with Markdown **2**

Header 1 **2**

Header 2 2

Tabset **2**

Tab 1 2

Tab 2 2

Images **2**

Code **2**

Plots **3**

Tables **5**

Footnotes **5**

What can RMarkdown be used for?

1. HTML Reports & PDF Reports
2. HTML Slide Decks & PowerPoint
3. Interactive Dashboards
4. Books with `bookdown`
5. Websites with `blogdown`

Key Resources

- RMarkdown Website with Gallery
- Key Reference: RMarkdown - The Definitive Guide
- PDF Printing Setup: tinytex

```
# PDF Knitting Setup: https://yihui.name/tinytex/
# install.packages("tintex")
# tinytex::install_tinytex()
```

Write with Markdown

Header 1

Header 2

Header 3

Plain text.

Type **bold**.

Type *italics*.

Type ***bold + italics***.

Talk about code - the `tidyverse` is awesome

Unordered List:

- Item 1
- Item 2

Ordered List:

1. First point
2. Second point
3. More points

Tabset

Tab 1

This is Tab 1

Tab 2

This is Tab 2

Images

Code

Figure 1: PSU Logo

Figure 2: PSU Logo

```
# Import stock prices
stocks <- tq_get(c("TSLA", "AMZN"),
                 get = "stock.prices",
                 from = "2016-01-01",
                 to = "2017-01-01")
stocks
```

```
## # A tibble: 504 x 8
##    symbol date        open  high   low close    volume adjusted
##    <chr>  <date>     <dbl> <dbl> <dbl> <dbl>     <dbl>    <dbl>
##  1 TSLA   2016-01-04  15.4  15.4  14.6  14.9 102406500     14.9
##  2 TSLA   2016-01-05  15.1  15.1  14.7  14.9  47802000     14.9
##  3 TSLA   2016-01-06  14.7  14.7  14.4  14.6  56686500     14.6
##  4 TSLA   2016-01-07  14.3  14.6  14.2  14.4  53314500     14.4
##  5 TSLA   2016-01-08  14.5  14.7  14.1  14.1  54421500     14.1
##  6 TSLA   2016-01-11  14.3  14.3  13.5  13.9  61371000     13.9
##  7 TSLA   2016-01-12  14.1  14.2  13.7  14.0  46378500     14.0
##  8 TSLA   2016-01-13  14.1  14.2  13.3  13.4  61896000     13.4
##  9 TSLA   2016-01-14  13.5  14    12.9  13.7  97360500     13.7
## 10 TSLA   2016-01-15  13.3  13.7  13.2  13.7  83679000     13.7
## # ... with 494 more rows
```

Plots

Plotting works as expected. Try changing:

- `out.height`, `out.width` and Knitting

Static plots:

```
g <- ggplot(data = stocks) +
  geom_point(mapping = aes(x = volume, y = adjusted, color = symbol))

g
```

Interactive plots:

- Use `ggplotly()`.

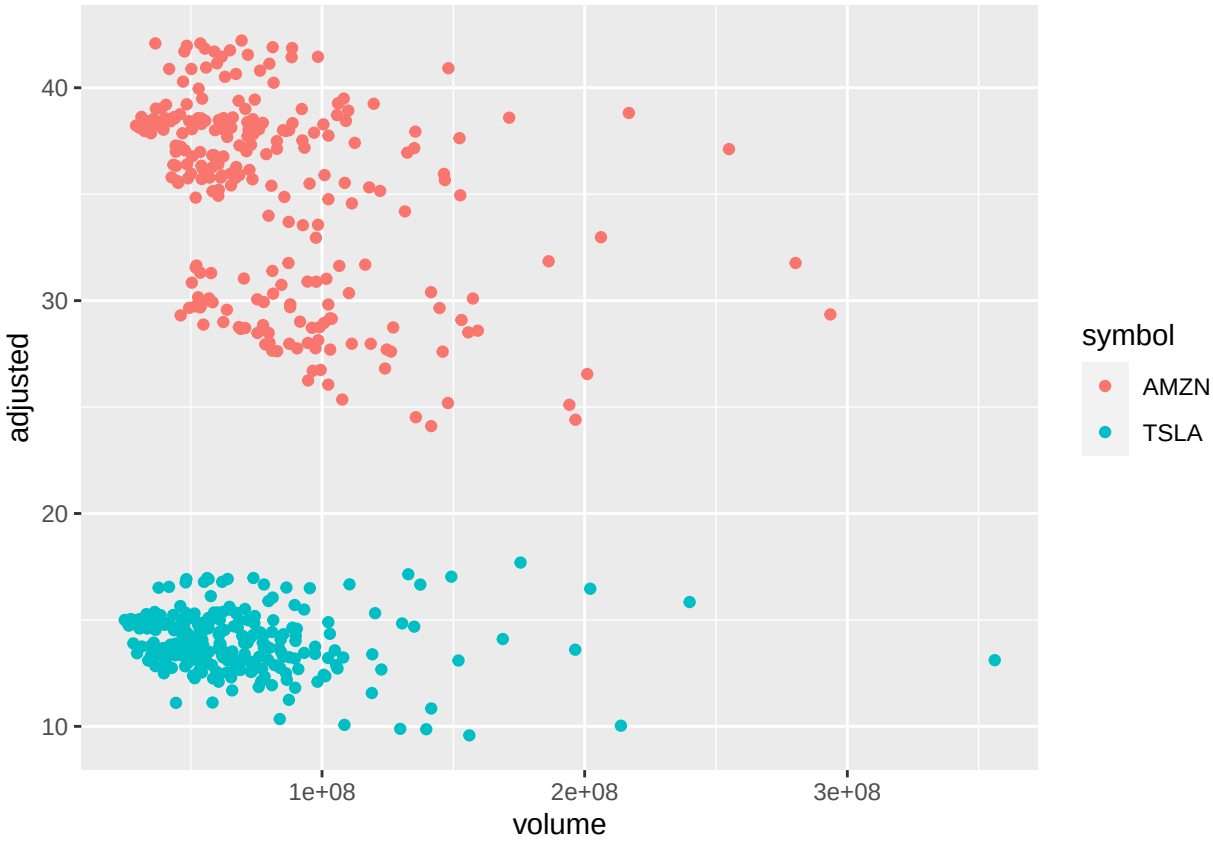

Figure 3: Revenue by Category

```
ggplotly(g)
```

Tables

Static Tables:

- `knitr` package - `knitr::kable()` - Simple to use, great with PDF

```
stocks %>% head() %>% knitr::kable()
```

symbol	date	open	high	low	close	volume	adjusted
TSLA	2016-01-04	15.38133	15.42533	14.60000	14.89400	102406500	14.89400
TSLA	2016-01-05	15.09067	15.12600	14.66667	14.89533	47802000	14.89533
TSLA	2016-01-06	14.66667	14.67000	14.39867	14.60267	56686500	14.60267
TSLA	2016-01-07	14.27933	14.56267	14.24467	14.37667	53314500	14.37667
TSLA	2016-01-08	14.52400	14.69600	14.05133	14.06667	54421500	14.06667
TSLA	2016-01-11	14.26733	14.29667	13.53333	13.85667	61371000	13.85667

Dynamic Tables:

- Potential Gotcha: Note that this will not print with format in PDF

```
stocks
```

```
## # A tibble: 504 x 8
##    symbol date        open  high   low close    volume adjusted
##    <chr>  <date>     <dbl> <dbl> <dbl> <dbl>     <dbl>    <dbl>
##  1 TSLA   2016-01-04  15.4  15.4  14.6  14.9 102406500     14.9
##  2 TSLA   2016-01-05  15.1  15.1  14.7  14.9  47802000     14.9
##  3 TSLA   2016-01-06  14.7  14.7  14.4  14.6  56686500     14.6
##  4 TSLA   2016-01-07  14.3  14.6  14.2  14.4  53314500     14.4
##  5 TSLA   2016-01-08  14.5  14.7  14.1  14.1  54421500     14.1
##  6 TSLA   2016-01-11  14.3  14.3  13.5  13.9  61371000     13.9
##  7 TSLA   2016-01-12  14.1  14.2  13.7  14.0  46378500     14.0
##  8 TSLA   2016-01-13  14.1  14.2  13.3  13.4  61896000     13.4
##  9 TSLA   2016-01-14  13.5  14    12.9  13.7  97360500     13.7
## 10 TSLA   2016-01-15  13.3  13.7  13.2  13.7  83679000     13.7
## # ... with 494 more rows
```

Footnotes

This is some text with a Footnote[1]. This is a second Footnote[2].

[1] Citation for Footnote 1
[2] Citatin for Footnote 2