Test Document

*a small sample of **R Markdown***

Kelly G. Roberts

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Contents

Abstract

Showing various ways that R Markdown allows for combining statistical analysis and LaTeX code into a cohesive whole.

1 Overview

So, let's talk about this whole LaTeX thing, shall we?

1.1 On the Subject of LaTeX

This article serves as a brief overview of the LaTeX document preparation system coupled with examples of the complex formatting it can help achieve. It must be emphasized that this is only a basic guide to help familiarize you with the power of using LaTeX as a means to prepare professional-level documentation.

1.1.1 Okay... so what can I, like, *do* with it?

Honestly? Whatever you want! You can do basically everything you could ever need to do when it comes to formatting a document in a professional and consistent way. This is one of the key benefits of using LaTeX; as long as you give the appropriate commands and syntax, your document will appear exactly as you specified. This is especially true when it comes to formatting items like equations. Have you ever tried to write a mathematical formula in something like Word? It can be an absolute nightmare to get the formatting correct without destroying the other text in the document.

Here's an example of a continued fraction, something that would be *exceptionally* difficult to write out in Word:

$$e = 2 + \cfrac{1}{1 + \cfrac{1}{2 + \cfrac{2}{3 + \cfrac{3}{4 + \cfrac{4}{5 + \ddots}}}}}$$

Now, that may look like it would be complicated to input into your text editor, but I can assure you that LaTeX makes this quite easy; all it takes is learning some basic commands.

2 Examples

> "I will, in fact, claim that the difference between a bad programmer and a good one is whether he considers his code or his data structures more important. Bad programmers worry about the code. Good programmers worry about data structures and their relationships."
>
> — Linus Torvalds

This time we actually used another package that we grabbed within our root R environment (`sudo R`) followed by the subcommand `install.packages('tufte')`. It allows us to put neat little footers into our block quotes. Neat, huh?

As stated by Aissen (1999), blah blah blah words words words. As you can see, all of the information that will end up in our bibliography is here, including the names of editors, the publisher, and the year of publication. Using this format, we can now call our new entry by its name, which in this case is `@aissen99`. Names can be whatever you choose that is easy to remember for you. I chose to use the author's last name and the year of publication.

2.1 Look at this table

Model	MPG	Cyl	Disp	HP
Mazda RX4	21.0	6	160	110
Mazda RX4 Wag	21.0	6	160	110

Model	MPG	Cyl	Disp	HP
Datsun 710	22.8	4	108	93
Hornet 4 Drive	21.4	6	258	110
Hornet Sportabout	18.7	8	360	175
Valiant	18.1	6	225	105

2.2 Lists: Nature's Organizer

1. First
   - subfirst
   - submore
   - subagain
2. Second
   - subsecond
     - deeper
       * still
   - subsecondsecond
3. Third

3 How about that R, though?

Here's something cool that you can do with code blocks: evaluate R code.

```
2+2
```

```
## [1] 4
```

In this case, we evaluated the chunk 2+2 into the output shown above.

How about some more complicated equations?

```
5*40
```

```
## [1] 200
```

```
3^9
```

```
## [1] 19683
```

```
values <- rnorm(5)
values
```

```
## [1] -0.09081229 -0.75520935  2.02432807  0.37943580  2.12220237
```

References

Aissen, Judith. 1999. "External Possessor and Logical Subject in Tz'utujil." In *External Possession*, edited by Doris Payne and Immanuel Barshi. John Benjamins Publishing Company.