

R Markdown

Natalie Nelson, PhD | BAE 495/590

We use R Markdown to create documents that integrate **text**, **code**, and code **outputs**.



Calculate and visualize correlations

Text

Next, let's calculate the correlations between `meat_produced`, `gdp`, and `total_population`. We can already see from the plots that `meat_produced` is correlated with `gdp` and `total_population`, but which correlation is stronger? It's hard to say just from the plots. We will use functions from the `corrr` package to calculate and visualize correlations. Prior to calculating correlations, be sure to remove the `country` column. The correlation function can only calculate correlation coefficients from numeric data. Since `country` is a character vector, you can't include this column when calculating correlations.

Code

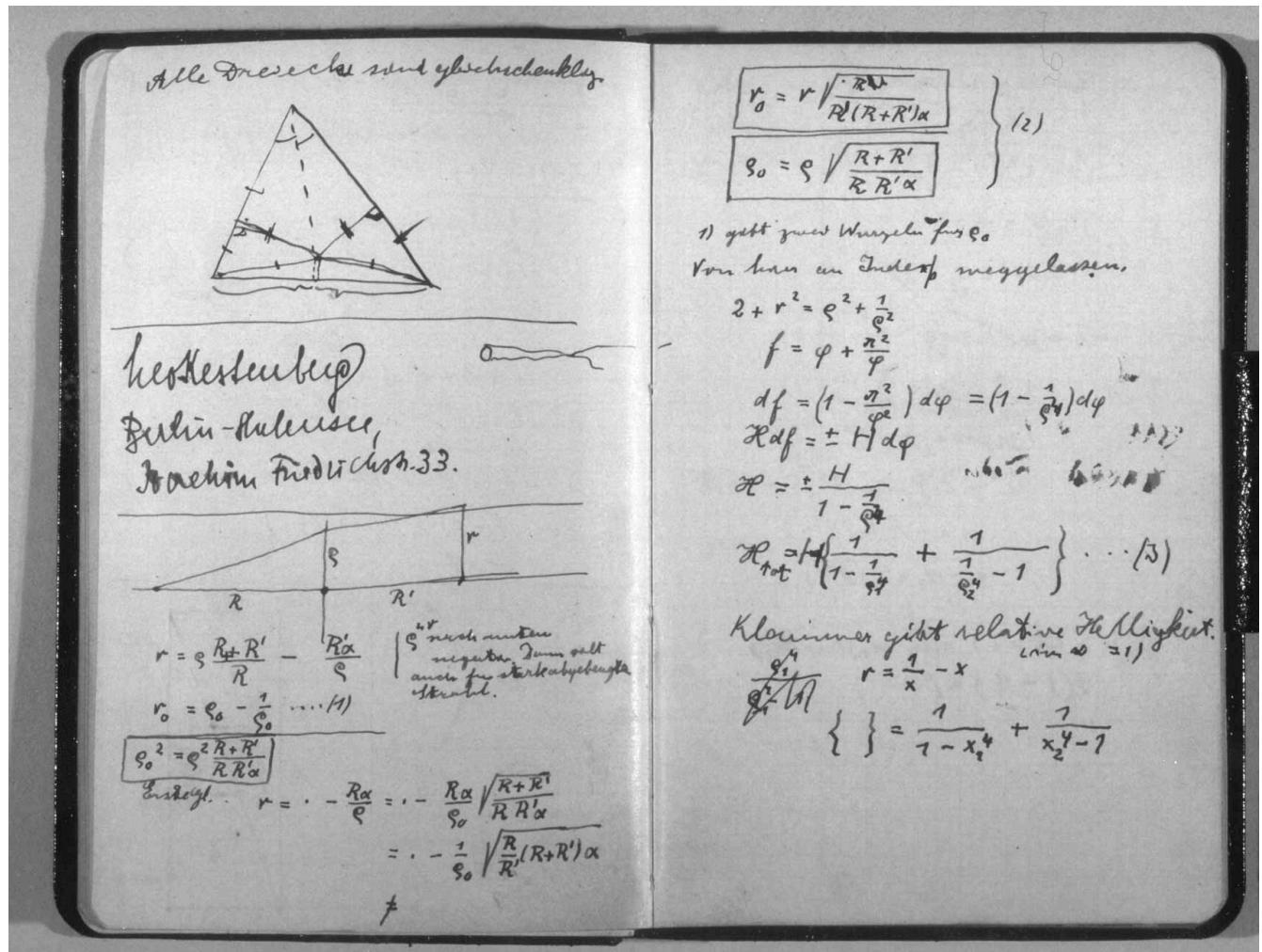
```
d_norm %>%
  dplyr::select(-country) %>%
  correlate() %>%
  fashion()
```

Output

```
##
## Correlation method: 'pearson'
## Missing treated using: 'pairwise.complete.obs'
```

```
##               rowname meat_produced   gdp total_population
## 1      meat_produced                 .83          .74
## 2              gdp                  .83          .57
## 3 total_population                .74          .57
```

You can think of
a R Markdown
document as a
lab notebook (or
sections of a lab
notebook)



As a lab notebook...

Calculate and visualize correlations

Next, let's calculate the correlations between `meat_produced`, `gdp`, and `total_population`. We can already see from the plots that `meat_produced` is correlated with `gdp` and `total_population`, but which correlation is stronger? It's hard to say just from the plots. We will use functions from the `corrr` package to calculate and visualize correlations. Prior to calculating correlations, be sure to remove the `country` column. The correlation function can only calculate correlation coefficients from numeric data. Since `country` is a character vector, you can't include this column when calculating correlations.

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```
##               rowname meat_produced   gdp total_population
## 1      meat_produced            .83        .74
## 2              gdp            .83        .57
## 3 total_population            .74        .57
```

Description

Methods

Results

R Markdown (.Rmd) file:

```
114 - ## Calculate and visualize correlations
115 Next, let's calculate the correlations between `meat_produced`, `gdp`, and `total_population`. We can already see from the plots that
`meat_produced` is correlated with `gdp` and `total_population`, but which correlation is stronger? It's hard to say just from the plots.
We will use functions from the `corrr` package to calculate and visualize correlations. Prior to calculating correlations, be sure to
remove the `country` column. The correlation function can only calculate correlation coefficients from numeric data. Since `country` is a
character vector, you can't include this column when calculating correlations.
116 - ````{r}
117 d_norm %>%
118   dplyr::select(-country) %>%
119   correlate() %>%
120   fashion()
121 ````
```

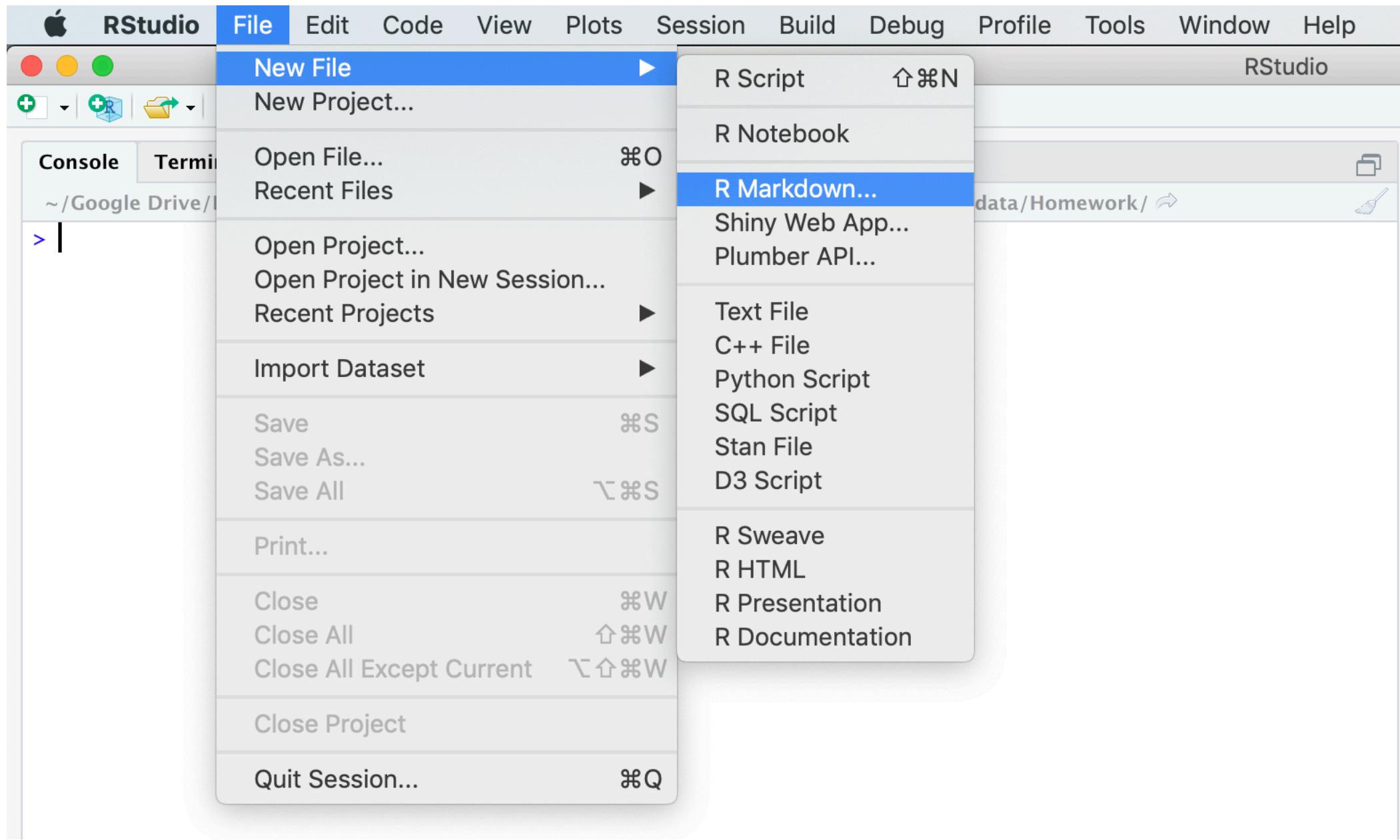
R Console

data.frame
3 x 4

rowname	meat_produced	gdp	total_population
meat_produced		.83	.74
gdp	.83		.57
total_population	.74	.57	

3 rows

Creating a R Markdown file



New R Markdown

 Document

 Presentation

 Shiny

 From Template

Title: Making a Markdown

Author: Natalie Nelson, PhD

Default Output Format:

HTML

Recommended format for authoring (you can switch to PDF or Word output anytime).

PDF

PDF output requires TeX (MiKTeX on Windows, MacTeX 2013+ on OS X, TeX Live 2013+ on Linux).

Word

Previewing Word documents requires an installation of MS Word (or Libre/Open Office on Linux).

OK

Cancel

Untitled1

ABC Knit Insert Run

```
1 ---  
2 title: "Making a Markdown"  
3 author: "Natalie Nelson, PhD"  
4 date: "11/19/2019"  
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 HTML, PDF, and MS Word documents. For more details on using R Markdown see <http://rmarkdown.rstudio.com>.  
15  
16 When you click the Knit button a document will be generated that includes both content as well as the output of any embedded R code chunks within the document. You can embed an R code chunk like this:  
17  
18 ```{r cars}  
19 summary(cars)  
20  
21  
22 ## Including Plots  
23  
24 You can also embed plots, for example:  
25  
26 ```{r pressure, echo=FALSE}  
27 plot(pressure)  
28  
29  
30 Note that the `echo = FALSE` parameter was added to the code chunk to prevent printing of the R code that generated the plot.  
31
```

2:1 # Making a Markdown R Markdown

1 YAML header

```
1 ---  
2 title: 'Module 11 Homework: Linear regression'  
3 author: "Natalie Nelson, PhD"  
4 date: "Fall 2019"  
5 output: html_document  
6 ---
```

2 Code chunks

```
```{r}  
d_norm %>%
 dplyr::select(-country) %>%
 correlate() %>%
 fashion()
```
```

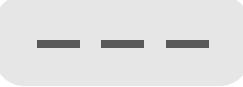
3 Markdown text

Calculate and visualize correlations

Next, let's calculate the correlations between `meat_produced`, `gdp`, and `total_population`. We can already see from the plots that `meat_produced` is correlated with `gdp` and `total_population`, but which correlation is stronger? It's hard to say just from the plots. We will use functions from the `corrr` package to calculate and visualize correlations. Prior to calculating correlations, be sure to remove the `country` column. The correlation function can only calculate correlation coefficients from numeric data. Since `country` is a character vector, you can't include this column when calculating correlations.

1 YAML header

```
1 ---  
2 title: 'Module 11 Homework: Linear regression'  
3 author: "Natalie Nelson, PhD"  
4 date: "Fall 2019"  
5 output: html_document  
6 ---
```

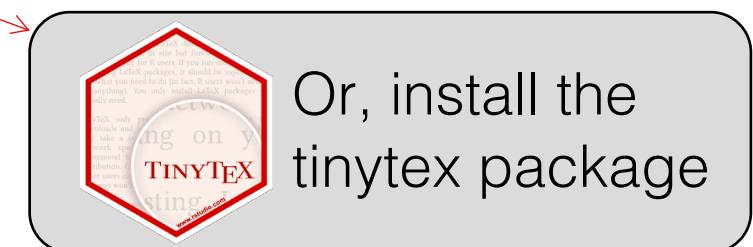
- YAML = YAML Ain't Markup Language
(originally, YAML = Yet Another Markup Language)
- Used to setup the Rmd file
- Starts/ends with 
- At a minimum, your header must include the output (but it's best practice to always have title, author, date)
- Indentation matters! Don't indent for now

1 YAML header

```
1 ---  
2 title: 'Module 11 Homework: Linear regression'  
3 author: "Natalie Nelson, PhD"  
4 date: "Fall 2019"  
5 output: html_document  
6 ---
```

The previous chapter focused on the default `html_document` output. There are a number of basic variations on that theme, generating different types of documents:

- `pdf_document` makes a PDF with LaTeX (an open source document layout system), ~~which you'll need to install~~. RStudio will prompt you if you don't already have it.
- `word_document` for Microsoft Word documents (`.docx`).
- `odt_document` for OpenDocument Text documents (`.odt`).
- `rtf_document` for Rich Text Format (`.rtf`) documents.
- `md_document` for a Markdown document. This isn't typically useful by itself, but you might use it if, for example, your corporate CMS or lab wiki uses markdown.
- `github_document` : this is a tailored version of `md_document` designed for sharing on GitHub.



② Code chunks

```
```{r}
d_norm %>%
 dplyr::select(-country) %>%
 correlate() %>%
 fashion()
```
```

- Starts/ends with 3 backticks
- To initialize the code header, include {r}
- Add a code chunk name and/or options (detailed in R4DS)

```
```{r setup, include=FALSE}
```

```
```{r buffer, echo=F, warning=F, error=F, message=F, fig.align='center'}
```

- In the chunk, write code just as you would in a regular R script

③ Markdown text

Calculate and visualize correlations

Next, let's calculate the correlations between `meat_produced`, `gdp`, and `total_population`. We can already see from the plots that `meat_produced` is correlated with `gdp` and `total_population`, but which correlation is stronger? It's hard to say just from the plots. We will use functions from the `corrr` package to calculate and visualize correlations. Prior to calculating correlations, be sure to remove the `country` column. The correlation function can only calculate correlation coefficients from numeric data. Since `country` is a character vector, you can't include this column when calculating correlations.

- Markdown is a style of preparing text that uses symbols and characters to control the text style
- For example, to make a word bold you would use *

Making a **bold claim.** → Making a **bold claim.**

③ Markdown text

Calculate and visualize correlations

Next, let's calculate the correlations between `meat_produced`, `gdp`, and `total_population`. We can already see from the plots that `meat_produced` is correlated with `gdp` and `total_population`, but which correlation is stronger? It's hard to say just from the plots. We will use functions from the `corrr` package to calculate and visualize correlations. Prior to calculating correlations, be sure to remove the `country` column. The correlation function can only calculate correlation coefficients from numeric data. Since `country` is a character vector, you can't include this column when calculating correlations.

- Read the R4DS section on preparing Markdown text, and use your cheat sheet and reference guide!
(reference guide > cheat sheet)



R Markdown Reference Guide

Learn more about R Markdown at rmarkdown.rstudio.com
Learn more about Interactive Docs at shiny.rstudio.com/articles

Contents:

- 1. **Markdown Syntax**
- 2. Knitr chunk options
- 3. Pandoc options

Syntax	Becomes
Plain text	Plain text
End a line with two spaces to start a new paragraph.	End a line with two spaces to start a new paragraph.
italics and _italics_	<i>italics</i> and <i>italics</i>
bold and __bold__	bold and bold
superscript^2^	superscript ²
... .	strikethrough

③ Markdown text

- To make paragraphs, bulleted lists, etc., you typically need an empty line between sections of text. Use the code line numbers as a reference point. **Also, have two spaces at the end of lines!**

```
15 - ## Assignment
16 In this homework assignment, you will wrangle and map the following geospatial data layers
17 (shapefiles):
18 - [Potential emergency shelters in
19 NC](https://www.nconemap.gov/datasets/potential-emergency-shelters). Potential emergency shelters
20 are sites that can be used as shelters in the event of an emergency. Data layer prepared by the NC
21 DIT Center for Geographic Information and Analysis. File name: `Potential_Emergency_Shelters`.
22 - [Urban areas in NC](https://www.nconemap.gov/datasets/NCDOT::ncdot-smoothed-urban-boundaries).
23 Data layer prepared by NC Department of Transportation. File name:
24 `NCDOT_Smoothed_Urban_Boundaries_simple`.
25 - State boundaries (entire U.S.). File name: `state_bounds`.
26 - [NC county boundaries](). Prepared by the NC Department of Transportation. File name:
27 `NCDOT_County_Boundaries`.
```

Knitting the document

A screenshot of the RStudio interface. The top bar shows various icons and the word "Knit". The code editor contains R code for calculating correlations. Below the code is a table titled "data.frame" showing a correlation matrix:

	meat_produced	gdp	total_population
meat_produced		.83	.74
gdp	.83		.57
total_population	.74	.57	
3 rows			

.Rmd *“knit”* .html



Calculate and visualize correlations

Next, let's calculate the correlations between `meat_produced`, `gdp`, and `total_population`. We can already see from the plots that `meat_produced` is correlated with `gdp` and `total_population`, but which correlation is stronger? It's hard to say just from the plots. We will use functions from the `corr` package to calculate and visualize correlations. Prior to calculating correlations, be sure to remove the `country` column. The correlation function can only calculate correlation coefficients from numeric data. Since `country` is a character vector, you can't include this column when calculating correlations.

```
d_norm %>%
  dplyr::select(-country) %>%
  correlate() %>%
  fashion()

## 
## Correlation method: 'pearson'
## Missing treated using: 'pairwise.complete.obs'

##           rowname meat_produced   gdp total_population
## 1     meat_produced        .83      .74
## 2         gdp            .83      .57
## 3 total_population        .74      .57
```

A screenshot of the RStudio interface showing an R Markdown file. The code includes YAML front matter with fields like title, author, date, and output, followed by two blank lines. The RStudio toolbar is visible at the top.

When you knit, a lot of work is taking place in the background:



R Markdown isn't just for
creating documents

Documents

With R Markdown, you write a single .Rmd file and then use it to render finished output in a variety of formats.

Great NYT Interactive -- Now Reusable with rCharts

Disclaimer and Attribution

I claim absolutely no credit for this visualization, which I consider one of the most best I have ever seen. All credit belongs to the [original source](#). If anybody believes this to be not fair use, I will take it down immediately. I am implicitly assuming approval for this fork due to the [data stories interview](#).

Another Favorite from NYT

I think we all know the data visualization team at NYT is simply amazing. Earlier this year in my post [d3 <- R with rCharts and shiny!](#) I adapted and recreated the [S2 Paths to the White House](#) to work with `rCharts` through `shiny`. Unfortunately, I was not creative enough to think of other data sets to plug into the visualization. When Scott Murray tweeted,



HTML

HTML documents for web publishing.

A Pandoc Markdown Article Starter and Template*

Steven V. Miller Clemson University

This document provides an introduction to R Markdown, argues for its benefits, and presents a sample manuscript template intended for an academic audience. I include basic syntax to R Markdown and a minimal working example of how the analysis itself can be conducted within R with the knitr package.

Keywords: pandoc, r markdown, knitr

Introduction

Academic workflow, certainly in political science, is at a crossroads. The *American Journal of Political Science* (AJP'S) is currently a leader¹ showing the way forward for authors who are to be considered for publication at the journal must hand over the raw code and data that produced the results shown in the manuscript. The editorial team at AJP'S then reproduces the code from the manuscript. Pending successful replication, the manuscript moves toward publication. The AJP'S might be at the forefront of this movement, and it could be the most aggressive among political science journals, but other journals in our field have signed the joint [Data Access & Research Transparency](#) (DART) initiative. This, at a bare minimum, requires uploading code from quantitatively-oriented published articles to in-house directories hosted by the journal or to services like [DataVerse](#).

There are workflow implications to the Lacour controversy as well. Political science, for the foreseeable future, will struggle with the extent of the [data fraud perpetrated by Michael Lacour](#) in an article co-authored with Donald P. Green in *Science*, the general scientific journal of record in the United States. A failure to reproduce LaCour's results with different samples uncovered a

PDF

PDF documents for printing. [Example Code](#)

A Microsoft Word document

RStudio
June 3, 2016

R Markdown

This is an R Markdown document. Markdown is a simple formatting syntax for authoring HTML, PDF, and MS Word documents. For more details on using R Markdown see <http://rmarkdown.rstudio.com>.

When you click the **Knit** button a document will be generated that includes both content as well as the output of any embedded R code chunks within the document. You can embed an R code chunk like this:

```
summary(race)
## #> #>   species dist
## #> #>   Min. :4.0 Max. :2.00
## #> #>   1st Qu.:12.0 1st Qu.:26.00
## #> #>   Median:15.0 Median:36.00
## #> #>   Mean :15.4 Mean :42.98
## #> #>   3rd Qu.:19.0 3rd Qu.:56.00
## #> #>   Max. :25.0 Max. :120.00
```

Including Plots

You can also embed plots, for example:

Microsoft Word

Microsoft Word documents for Office workflows.

Tufte Handout

An implementation in R Markdown

JJ Allaire and Yihui Xie

2016-02-03

Introduction

The Tufte handout style is a style that Edward Tufte uses in his books and handouts. Tufte's style is known for its extensive use of side notes, tight integration of graphics with text, and well-set typography. This style has been implemented in LaTeX and HTML/CSS⁵, respectively. We have ported both implementations into the `tufte` package. If you want LaTeX/PDF output, you may use the `tufte::handout` format for handouts, and `tufte::book` for books. For HTML output, use `tufte::html`. These formats can be either specified in the YAML metadata at the beginning of an R Markdown document (see an example below), or passed to the `rmarkdown::render()` function. See Allaire et al. (2015) more information about `rmarkdown`.

```
...  
title: "An Example Using the Tufte Style"  
author: "John Smith"
```

⁵ See GitHub repositories [tufte-latex](#) and [tufte-css](#)

Allaire, JJ, Joe Cheng, Yihui Xie, Jonathan McPherson, Hui Chou, Jeff Allen, Hadley Wickham, Aron Atkins, and Rob Hyndman. 2015. *Rmarkdown: Dynamic Documents for R*. <http://rmarkdown.rstudio.com>.

Handouts

Tufte styled documents for handouts. [Example Code](#)

Interactive Documents

Combine R Markdown with htmlwidgets or the shiny package to make interactive documents.



HTML Widgets +

Add interactive graphics with htmlwidgets, such as the leaflet map widget.

UNCCC Data Report

Marwa Salem
July, 2015

- 1 Disclaimer
- 2 Data Overview
 - 2.1 Annexes Data
 - 2.1.1 Country-Level Data
 - 2.1.2 Annex and Non-Annex Countries
 - 2.2 Data Forecasts
- 3 Acknowledgements

1 Disclaimer

This interactive document is just a demonstration of the capabilities of Rmarkdown and Shiny. It is not an actual report for the UNCCC data. Although the numbers displayed in the plots and tables are taken from the UNCCC website, only the first paragraph of the text is written and is based on the UNCCC data. The rest of the text is from an online Lpsum generator.

2 Data Overview

All the numbers in the following paragraph are calculated by inline bits of R code that use the UNCCC datasets. This paragraph:

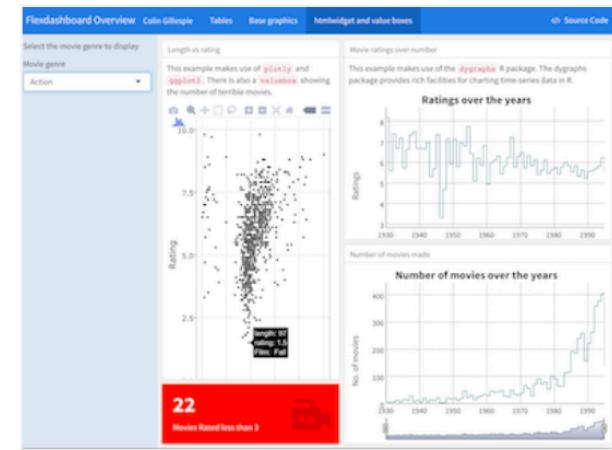
```
The United Nations Framework Convention on Climate Change (UNCCC) reports emissions data for `length(unique(all_entry[, 'Country']))` countries, `length(unique(all_entry[Region]))` Annex I countries, which are classified as Annex I countries, and `length(unique(all_entry[Non_Annex_Country]))` Non-Annex I countries. The reported data comprises `length(unique(allEntry[, 'GHG_gas]))` greenhouse (GHG) gases, `length(unique(allEntry[, 'GHG_gas]))`(`length(unique(allEntry[, 'GHG_gas])) - 1)` and `length(unique(allEntry[, 'GHG_gas]))`(`length(unique(allEntry[, 'GHG_gas])) - 1)` non-GHG gases. The latest reported data spans the period 1990 - 2012. In 2012, the US produced a total of `round(sum(allEntry[Country == 'United States of America' & Year == max(unique(allEntry[, 'Year]))], sumValue, na.rm = TRUE))` dg of emissions of the different GHG gases.
```

Becomes:

The United Nations Framework Convention on Climate Change (UNCCC) reports emissions data for 197 countries, 44 of which are classified as Annex I countries, while 153 are Non-Annex I countries. The reported data comprises 5 greenhouse (GHG) gases, CH₄, N₂O, HFCs and SF₆. The latest reported data spans the period 1990 - 2012. In 2012, the US produced a total of 3.865310¹² Gg of emissions of the different GHG gases.

HTML Widgets +

Embed htmlwidgets such as dygraphs and datatables directly into your reports.



Shiny +

Shiny components and htmlwidgets will work in any HTML based output, such as a file, slide show or dashboard.

Dashboards

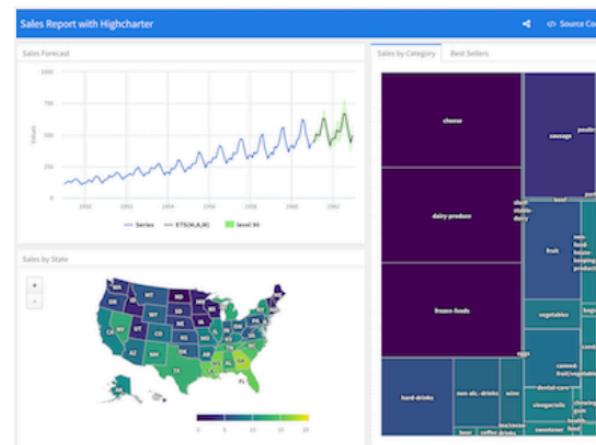
Combine R Markdown with the `flexdashboard` package to quickly assemble R components into administrative dashboards. Each example below contains a link to the source code within the dashboard.



[Dashboard with gauges and value boxes](#)

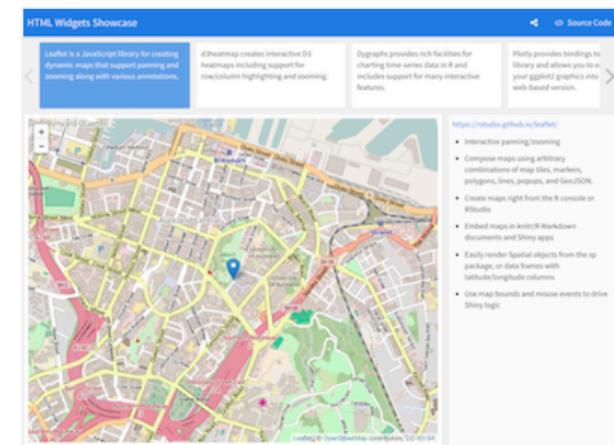


Use `flexdashboard` to create dashboards with gauges and value boxes.



[Dashboard with htmlwidgets](#)

Add interactive graphics to a dashboard with `htmlwidgets`.



[Dashboard with storyboard](#)

Organize dashboards around a storyboard.

Presentations

R Markdown supports several presentation (slide show) formats.

An Example R Markdown Document
(A Subtitle Would Go Here if This Were a Class)

Steven V. Miller

Department of Political Science



[Beamer slideshow](#)

Create pdf slides with Beamer. Example Code.



[Slidy slideshow](#)

Create HTML-based slides with Slidy.

A screenshot of a Slidy presentation slide. At the top, there is a blue header bar with the "Shiny" logo. The main content area has a dark background with white text. The title "Debugging with Shiny" is centered at the top. Below the title, the author's name "Jonathan McPherson" is listed. A horizontal blue bar spans most of the slide width. At the bottom, there is footer text "Copyright (c) 2016, RStudio, Inc." and "slide 4/16".

[ioslides slideshow](#)

Create HTML-slides with ioslides. Example Code

Principles of Reactivity

Joe Cheng <joe@rstudio.com>

#ShinyDevConf – January 30, 2016

[reveal.js slideshow](#)

Create HTML-based slides with reveal.js. Example Code

Books

Use R Markdown alongside bookdown to author books and then distribute the books as PDF, HTML, EPUB documents and more. Here are some books that have been authored in R Markdown.

Authoring Books with **R Markdown**

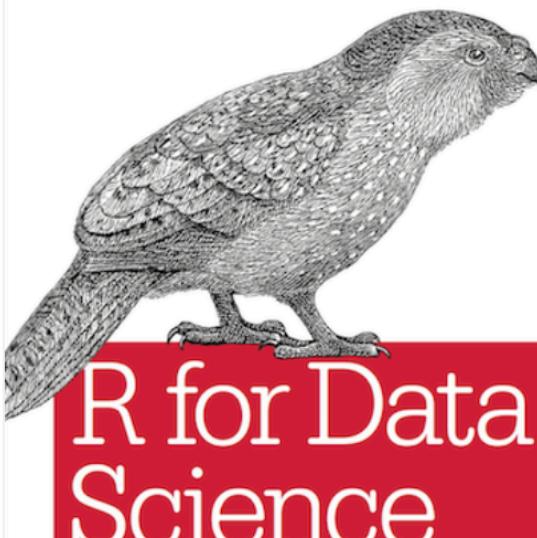
Yihui Xie



[Bookdown: Authoring Books with R Markdown](#)

The Bookdown book explains how to author books in R Markdown.

O'REILLY®



Garrett Grolemund &
Hadley Wickham

[R for Data Science](#)

R for Data Science teaches how to do Data Science with R.

O'REILLY®



Efficient R
Programming

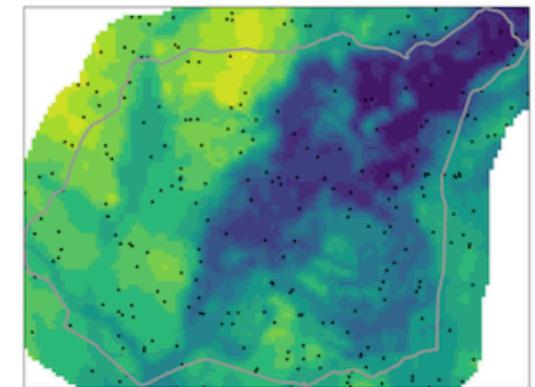
A PRACTICAL GUIDE TO SMARTER PROGRAMMING

Colin Gillespie & Robin Lovelace

[Efficient R Programming](#)

Efficient R Programming explains how to write nimble, performant R code.

Geostatystyka w R



Jakub Nowosad

[Geostatystyka w R](#)

Geostatystyka w R is a Polish introduction to geostatistics.

Websites

R Markdown makes it easy to build webpages straight from .Rmd files.

R Markdown

Dynamic Documents for R

R Markdown is an authoring format that enables easy creation of dynamic documents, presentations, and reports from R. It combines the core syntax of `markdown` (an easy to write plain text format) with embedded R code chunks that are run so their output can be included in the final document.

R Markdown documents are fully reproducible (they can be automatically regenerated whenever underlying R code or data changes).

R Markdown has many available output formats including HTML, PDF, MS Word, Beamer, HTML slides, Tufte handouts, books, dashboards, and websites.

Getting Started

- Quick Tour
- R Markdown Cheat Sheet
- R Markdown Reference Guide

Learning More

With the basics described above you can get started with R Markdown right away. To learn more see:

- Markdown Basics, which describes the most commonly used markdown constructs.

flexdashboard Examples

The examples below illustrate the use of flexdashboard with various packages and layouts. If you want to learn more about how the dashboards were created each example includes a link to its source code.

flexDashboard

flexdashboard extends R Markdown to make administrative dashboards. Its website is also built from R Markdown. [Example Code](#)

bookdown

Books [Getting Started](#) [About](#)

Write HTML, PDF, ePUBs, and Kindle books with R Markdown

Bookdown: Authoring Books with R Markdown

Yihui Xie
2016-04-29

A guide to authoring books with R Markdown, including how to generate figures and tables, and insert cross-references, citations, HTML, widgets, and Shiny apps in R Markdown. The book can be exported to HTML, PDF, and e-books (e.g. EPUB). The book style is customizable. You can easily write and preview the book in RStudio IDE or ...

R for Data Science

Hadley Wickham, Garrett Grolemund
2016-04-29

This book will teach you how to do data science with R. You'll learn how to get your data into R, get it into the most useful structure, transform it, visualise it and model it. In this book, you will find a practical set of skills for data science. Just as a chemist learns how to clean test tubes and stock a lab, you'll learn how to clean data and draw plots—and ...

Geostatistics w R

Janus Novembre
2016-05-08

Introduction to geostatistics with R (in Polish).

Efficient R programming

RStudio IDE integration

The RStudio IDE includes integrated support for profiling with profvis. These features are available in the current Preview Release of RStudio.

Profiling code

There are a number of ways to start and stop the profiler:

- From the **Profile** menu, you can start and stop the profiler.
- From the **Profile** menu, you can run a selected block of code with profiling.
- From the editor pane's code tool menu, you can run a selected block of code with profiling.

profvis

profvis provides profiling tools for R code, as well as a website made with R Markdown. [Example Code](#)

Templates

Create reusable templates to quickly apply styling and content to your R Markdown document.



Journal of Statistical Software
MMMM YYYY, Volume VV, Issue II. <http://www.jstatsoft.org/>

A Capitalized Title: Something about a Package foo

FirstName LastName
University/Company Second Author
Affiliation

Abstract
The abstract of the article.

Keywords: keywords, not capitalized, Java.

1. Introduction

JSS

The JSS article template in the `rticles` package formats an R Markdown document to meet the style guidelines of the Journal of Statistical Software. [Example Code !\[\]\(f15da8627380db409bac161a6cb03047_img.jpg\)](#)

CONTRIBUTED RESEARCH ARTICLE

Capitalized Title Here

by Author One, Author Two

Abstract An abstract of less than 150 words.

Introduction
Introductory section which may include references in parentheses (R Core Team, 2012), or cite a reference such as R Core Team (2012) in the text.

Section title in sentence case
This section may contain a figure such as Figure 1.



Figure 1: The logo of R.

Another section
There will likely be several sections, perhaps including code snippets, such as:

R Journal

The rjournal article template in the `rticles` package formats an R Markdown document to meet the style guidelines of the R Journal.

[Example Code !\[\]\(4754fc919b2e8116c30595fd4b918f00_img.jpg\)](#)

NAVITITLE

INSERT_TITLE_HERE

AUTHOR • 2016-06-03

Captain John Sheridan: You know, I just had a thought. You've been back and forth to your world so many times since you got here. How do I know you're the same Voron? Inside that encounter suit you could be anyone. Kosh Naranek, I have always been here. Captain John Sheridan: Oh, yeah? You said that about me too. Kosh Naranek: Yes, [starts to walk away] Captain John Sheridan: I really hate it when you do that. Kosh Naranek: [turns around] Good Deleini! I am Grey. I stand between the candle and the star. We are Grey. We stand between the darkness and the light.

Lil' Orpheus: Do we trust no-one then? G'Kar: Susan Ivanova: No, that's幼稚, trust yourself, anybody else, who'dem. Ta'Lon: Congratulations citizen O'Kar. You are now a religious icon. Susan Ivanova: So the next time we find out where the Shadows plan to strike, we can mine the area, and as soon as they come out of hyperspace... Citizen O'Kar: Then, as you so conciently say, Boom!

Section Title

O'Kar: It is said that the future is always born in pain. The history of war is the history of pain. If we are wise, what is born of that pain matures into the promise of a better world, because we learn that we can no longer afford the mistakes of the past. Dr. Stephen Franklin: Doesn't anyone listen to one damn word I say? Captain John Sheridan: No surrender, no retreat. [Opening narration, season 4] Laren: I wish he just died, Zack. Lyta: The year of darkness. Citizen O'Kar: The year we found what we were. Lya: Ambassador. That was the year of rebirth. Ambassador O'Kar: The year of great sadness. Marcus Colos: The year of pain. Deleini: And a year of joy. Ambassador Londo Mollari: It was a new age. Dr. Stephen Franklin: It was the end of history. Susan Ivanova: It was the year everything changed. Michael Garibaldi: The year is 2261. Captain John Sheridan: The place, Babylon 5. Sinclair: They say

Skeleton

The skeleton template is one of several provided in Bob Rudis' `markdowntemplates` package.

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Journal Articles
Student. 1938. "Comparison between Balanced and Random Arrangements on Field Plots." *Biometrika* 29(3-4): 363-378.

CV

Steve Miller's CV template formats an R Markdown file into a Curriculum Vitae (CV). [Example Code !\[\]\(c7645bfa7100f26509f422bc4088dca9_img.jpg\)](#)

R Markdown in RStudio