Upping your R Markdown game

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Tables

Tables

- Tables are always a bit of a pain…

- By default, R Markdown prints out tables the same way R does, which is not that pretty

- Quick fix: `knitr::kable()`

- Anther quick fix, especially for printing out the entire data frame is `DT::datatable()`

Your turn

- Open `sd-burritos-tables.Rmd`, knit, and review the `datatable()` output

- Update this output such that

  - Only `Location`, `Burrito`, `Reviewer`, and `overall` rating are displayed

  - Only 5 observations are shown on each page

  - Searching functionality is turned off

  - Dropdown menu for how many observations to show is 5, 10, and 50

- The following two resources might be useful:

  - DataTables reference: https://datatables.net/reference/option/

  - datable package reference: https://rstudio.github.io/DT/

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Other table-making packages

We're not going to go through these in detail but they're good to have on your radar:

— `kableExtra`

— `xtable`

— `stargazer`

— `pander`

— `tables`

— `ascii`

Bibliography and citation

List references in YAML

```
references:
- id: Kaggle18
  title: Burritos in San Diego
  author:
  - family: Cole
    given: Scott
  URL: 'https://www.kaggle.com/srcole/burritos-in-san-diego'
  type: article
  issued:
    year: 2018
    month: 1
```

Use bibliography file

- You can specify a bibliography file using the `bibliography` field in the YAML

- This can be a .bib file, or take on a variety of other formats:

Format	File extension
MODS	.mods
BibLaTeX	.bib
BibTeX	.bibtex
RIS	.ris
EndNote	.enl
EndNote XML	.xml
ISI	.wos
MEDLINE	.medline
Copac	.copac
JSON citeproc	.json

Source: http://rmarkdown.rstudio.com/authoring_bibliographies_and_citations.html

Citation syntax

- Each citation must have a key, composed of @ + the citation identifier from the database

- Two styles:

  - `[@Kaggle18]`: (Cole 2018)

  - `@Kaggle18`: Cole (2018)

- Separate multiple citations with semicolons

Your turn

- Add a reference to the `rmarkdown` package in the bibliography.bib file.

- Add a citation to it in the `sd-burritos-bibcit.Rmd` file.

- Knit the document to confirm the citation appears as expected.

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Templates

Templates

- We have already used some templates (xaringan and tufte)

- Many other packages come with similar templates

- Templates can also be useful for teaching purposes

- The `rticles` package is a rich source of templates for authoring scientific articles for various journals

Your turn

- **Before you start:** Make sure the rticles package is installed and loaded.

- Go to New File ➡ R Markdown… ➡ From Template, and then choose the template for the R Journal (unless another journal's name catches your eye)

- Knit the document without any changes to observe the look and the pieces of meted you would need to fill in to make it your own.

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Parametrized reports

(aka first dip into interactivity)

Parametrized reports

- Parameters are useful when you want to re-render the same report with distinct values for various key inputs, for example:

  - Running a report specific to a department or geographic region

  - Running a report that covers a specific period in time

  - Running multiple versions of a report for distinct sets of core assumptions

- Declare parameter name, type, and default value in the YAML

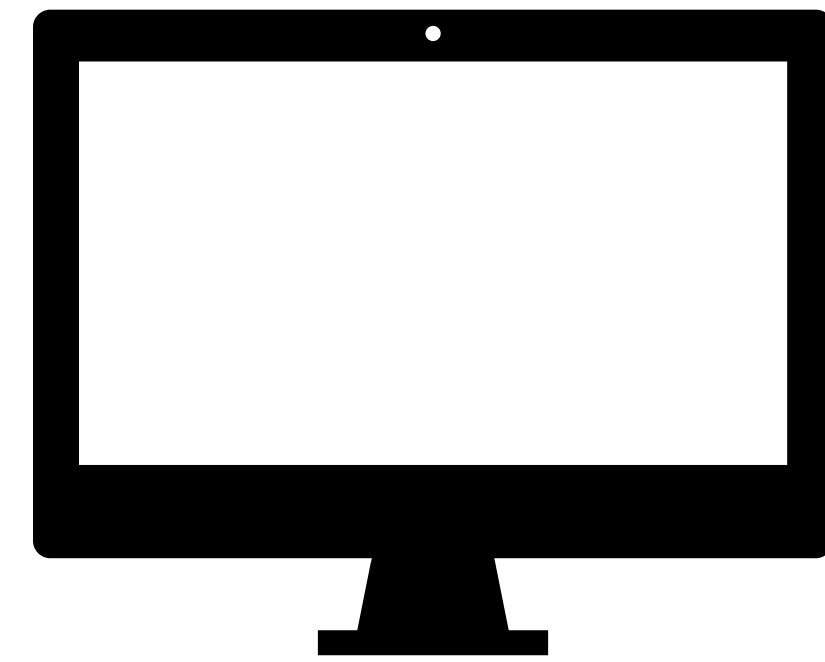- Change parameter values by passing to the `rmarkdown::render` function

```
sd-burritos-parametrized.Rmd
```

OPTION 1

```
rmarkdown::render("sd-burritos-parametrized.Rmd",
params = list(Reviewer = "Scott"))
```

OPTION 2

```
rmarkdown::render("sd-burritos-parametrized.Rmd",
params = "ask"))
```

DEMO

Your turn

- Add another parameter to the YAML of `sd-burritos-parametrized.Rmd` to subset the data based on another attribute (e.g. burrito type or date reviewed).

- Make the appropriate adjustments to the R code in the document to take into account this new variable.

- Render the document with this parameter in place.

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