Presentations in RMarkdown

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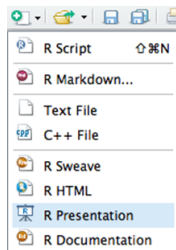
The power of RMarkdown

http://rmarkdown.rstudio.com/

R Presentation

- Default presentations in RStudio

https://support.rstudio.com/hc/en-us/sections/
200130218-R-Presentations

Formatting R presentations | Beamer

- LaTeX-based document template for creating slides and presentations
- YAML setting: `output: beamer_presentation`
- YAML settings for `theme`, `colortheme`, `fonttheme`
- Markdown syntax can be mixed with LaTeX
- Presentation format: `http://rmarkdown.rstudio.com/beamer_presentation_format.html`
- Customizing Beamer slides: `https://kbroman.wordpress.com/2013/10/07/better-looking-latexbeamer-slides`

Formatting R presentations | ioslides

- Default format for RMarkdown presentations
- YAML setting: `output: ioslides_presentation`
- Markdown syntax can be mixed with HTML
- Presentation format: `http://rmarkdown.rstudio.com/ioslides_presentation_format.html`
- Example:
  `https://github.com/mdozmorov/presentations/tree/master/reproducible_research/reproducible_research_2016-09-09`

Formatting R presentations

- **Slidy**: a HTML-based slideshow
  1. YAML setting: **output: slidy_presentation**
  2. Tutorial/example: `https://www.w3.org/Talks/Tools/Slidy2/`

- **reveal.js**: the HTML presentation framework, highly customizable
  1. YAML setting: **output: revealjs::revealjs_presentation**
  2. Example: `http://lab.hakim.se/reveal-js/`

Slidify

- Customizable presentations in R Markdown. HTML-based. Can render presentations in any format.
- `http://slidify.org/`: 5 min video tutorial
- Example: Slidify: 'Reproducible HTML Slides from R Markdown', `http://slidify.org/samples/intro/`
- Themes: `https://ramnathv.github.io/slidifyExamples/`

Tufte-style handouts

- Distinctive style of text with sidenotes
- `tufte` package implements rendering `tufte_handouts`, `tufte_book`, `tufte_html`
- Installed as a template
- Presentation format: `http://rmarkdown.rstudio.com/tufte_handout_format.html`

EDWARD TUFTE MAGAZINE 09.01.03 12:00 PM

POWERPOINT IS EVIL

Power Corrupts. PowerPoint Corrupts Absolutely.

Imagine a widely used and expensive prescription drug that promised to make us beautiful but didn't. Instead the drug had frequent, serious side effects: It induced stupidity, turned everyone into bores, wasted time, and

`https://www.wired.com/2003/09/ppt2/`

Interactive reports

- Shiny - a web application framework for R,
  http://shiny.rstudio.com/
- Presentation format,
  http://rmarkdown.rstudio.com/authoring_shiny.html
- Generally used for exploratory data analysis

Bookdown

- Authoring Books with R Markdown:
  `https://github.com/rstudio/bookdown`
- `https://bookdown.org/`: free books authored with bookdown
- Example: 'Bookdown: Authoring Books with R Markdown',
  `https://bookdown.org/yihui/bookdown/`

Websites | GitHub pages

- A simple way to make a website using Markdown and git, `http://rmarkdown.rstudio.com/rmarkdown_websites.html`
- GitHub pages hosting, `https://pages.github.com/` - quick start on one page
- Example: 'Easy websites with GitHub Pages', `http://kbroman.org/simple_site/`

Publishing articles

- LaTeX Journal Article Templates for R Markdown,
  `https://github.com/rstudio/rticles`

PeerJ

open access peer-reviewed scientific mega journal, `https://peerj.com/`

- Free preprint submission. Judges scientific/methodological rigor. Does not judge the results (may be null), interest or impact

`https://github.com/PeerJ/paper-now`

Formulas in Markdown

- **MathJax** - formula rendering engine accepting LaTeX, MathML, or AsciiMath syntax.
- Inline formula - decorate with `$..$`
  - e.g. `"... when $x < y$ we have ..."`
  - becomes "... when $x < y$ we have ..."
- Self-standing equation - decorate with `$$..$$`
  - e.g. `$$\sum_{i=0}^n i^2 = \frac{(n^2+n)(2n+1)}{6}$$`
  - becomes

$$\sum_{i=0}^{n} i^2 = \frac{(n^2 + n)(2n + 1)}{6}$$

https://en.wikibooks.org/wiki/LaTeX/Mathematics
http://meta.math.stackexchange.com/questions/5020/
mathjax-basic-tutorial-and-quick-reference

RPubs

- `http://rpubs.com/`: publishing R Markdown reports and presentation on the web
- Everything public
- Example: 'R Cookbook - Chapter 11 - Linear Regression and ANOVA', `http://rpubs.com/escott8908/RC11`