

# Presentations in RMarkdown

Mikhail Dozmorov

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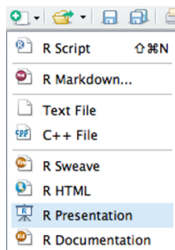
# The power of RMarkdown



<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](http://rmarkdown.rstudio.com/ioslides_presentation_format.html)
- Example:  
[https://github.com/mdozmorov/presentations/tree/master/reproducible\\_research/reproducible\\_research\\_2016-09-09](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/>

- 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/slidyExamples/>

# 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](http://rmarkdown.rstudio.com/tufte_handout_format.html)

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## 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](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](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/](http://kbroman.org/simple_site/)

# Publishing articles

- LaTeX Journal Article Templates for R Markdown,  
<https://github.com/rstudio/articles>

## 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>

- <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>

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 mdozmorov

## ***Easy web publishing from R***

Write R Markdown documents in RStudio.

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