Class 4 – R Markdown

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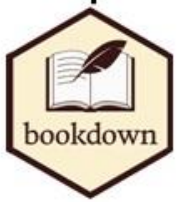
R Markdown:



- Books
- Journal articles
- Long form documents

Slide presentations

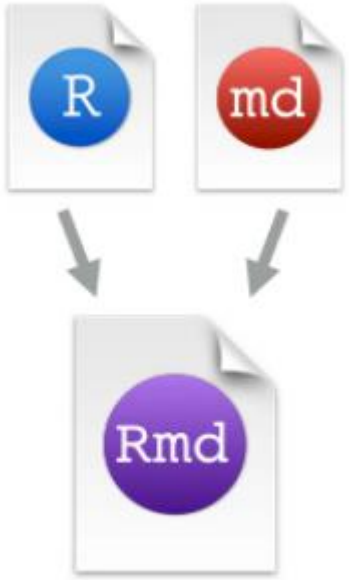
- ioslides
- slidy
- Beamer
- PowerPoint
- reveal js

Document + code

- HTML document
- PDF
- LaTeX
- Interactive notebooks
- Dashboards

- Websites/blogs

R Markdown:



Explore this link over the weekend:
https://bookdown.org/yihui/bookdown/

Rmarkdown reference from Rstudio:
https://rstudio.com/wp-content/uploads/2015/03/rmarkdown-reference.pdf

Rmarkdown **cheat sheet** from Rstudio “Help”

Mathematical equations in R Markdown (1)

$x = y$	`$x = y $`
$x < y$	`$x < y $`
$x > y$	`$x > y $`
$x \le y$	`$x \le y $`
$x \ge y$	`$x \ge y $`
x^n	`$x^{n}$`
x_n	`$x_{n}$`
$\overline{x}$	`$\overline{x}$`
$\hat{x}$	`$\hat{x}$`
$\tilde{x}$	`$\tilde{x}$`
$\frac{a}{b}$	`$\frac{a}{b}$`
$\frac{\partial f}{\partial x}$	`$\frac{a}{b}$`
$\displaystyle \frac{\partial f}{\partial x}$	`$\displaystyle \frac{a}{b}$`
$\binom{n}{k}$	`$\binom{n}{k}$`
$x_1 + x_2 + \cdots + x_n$	`$x_{1} + x_{2} + \cdots + x_{n}$`
$x_1, x_2, \dots, x_n$	`$x_{1}, x_{2}, \dots, x_{n}$`
$\mathbf{x} = \langle x_1, x_2, \dots, x_n \rangle$	`\mathbf{x} = \langle x_{1}, x_{2}, \dots, x_{n}\rangle$` (`\bm` from the `bm` pacakge would be better)
$x \in A$	`$x \in A$`
$\|A\|$	`$\|A\|$`

Mathematical equations in R Markdown (2)

$A \subset B$	`$x \subset B$`
$A \subseteq B$	`$x \subseteq B$`
$A \cup B$	`$A \cup B$`
$A \cap B$	`$A \cap B$`
$X \sim \text{Binom}(n, \pi)$	`$X \sim {\sf Binom}(n, \pi)$`
$\mathrm{P}(X \le x) = \texttt{pbinom}(x, n, \pi)$	`$\mathrm{P}(X \le x) = {\tt pbinom}(x, n, \pi)$`
$P(A \mid B)$	`$P(A \mid B)$`
$\mathrm{P}(A \mid B)$	`$\mathrm{P}(A \mid B)$`
$\{1, 2, 3\}$	`$\{1, 2, 3\}$`
$\sin(x)$	`$\sin(x)$`
$\log(x)$	`$\log(x)$`
$\int_a^b$	`$\int_{a}^{b}$`
$\left(\int_a^b f(x) \; dx\right)$	`$\left(\int_{a}^{b} f(x) \; dx\right)$`
$\left[\int_{-\infty}^{\infty} f(x) \; dx\right]$	`$\left[\int_{-\infty}^{\infty} f(x) \; dx\right]$`
$F(x)\Big\vert_a^b$	`$\left. F(x) \right\|_{a}^{b}$`
$\sum_{x=a}^{b} f(x)$	`$\sum_{x = a}^{b} f(x)$`
$\prod_{x=a}^{b} f(x)$	`$\prod_{x = a}^{b} f(x)$`
$\lim_{x \to \infty} f(x)$	`$\lim_{x \to \infty} f(x)$`
$\displaystyle \lim_{x \to \infty} f(x)$	`$\displaystyle \lim_{x \to \infty} f(x)$`

Greek letters in R Markdown

αA	`$\alpha A$`	νN	`$\nu N$`
βB	`$\beta B$`	$\xi \Xi$	`$\xi\Xi$`
$\gamma \Gamma$	`$\gamma \Gamma$`	oO	`$o O$` (omicron)
$\delta \Delta$	`$\delta \Delta$`	$\pi \Pi$	`$\pi \Pi$`
$\epsilon \varepsilon E$	`$\epsilon \varepsilon E$`	$\rho \varrho P$	`$\rho\varrho P$`
ζZ	`$\zeta Z$`	Σ	`$\sigma \Sigma$`
ηH	`$\eta H$`	τT	`$\tau T$`
$\theta \vartheta \Theta$	`$\theta \vartheta \Theta$`	$\upsilon \Upsilon$	`$\upsilon \Upsilon$`
ιI	`$\iota I$`	$\phi \varphi \Phi$	`$\phi \varphi \Phi$`
κK	`$\kappa K$`	χX	`$\chi X$`
$\lambda \Lambda$	`$\lambda \Lambda$`	$\psi \Psi$	`$\psi \Psi$`
μM	`$\mu M$`	$\omega \Omega$	`$\omega \Omega$`

You don’t need to memorize anything!

This couldn’t be easier using software like **mathpix snipping** tool

https://mathpix.com/