Evaluation Reports with R

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March-16-2016

https://goo.gl/2nRIHx
Reproducibility & Meta-evaluation
Computational results must be integrated into final publications. Traditional methods - running jobs interactively by hand, reformatting data by hand, looking up computational results and copying and pasting into documents - are now understood to be irresponsible.

*Fifty Years of Data Science*
David Donoho
Literate Programming

An approach to programming introduced by Donald Knuth in which “a program is given as an explanation of the program logic in a natural language, such as English, interspersed with snippets of macros and traditional source code, from which a compilable source code can be generated.”

(Source: Wikipedia)

## R Markdown

This is an R Markdown document. Markdown is a simple formatting syntax for authoring HTML, PDF, and MS Word documents.

```r
\{r pressure, echo=FALSE}
plot(pressure)
```

LaTeX is a document preparation system for high-quality typesetting. It is most often used for medium-to-large technical or scientific documents but it can be used for almost any form of publishing.

- Less formal reporting
- Web publication

- Formal reporting
- Journal publication
- Dissertations
LaTeX and Markdown Purpose

- Focus on content not formatting
- Automatic formatting uses optimized layout (type-setting) to improve readability
Refer to Google Drive folder for demonstration files

1) RMarkdown
2) LaTeX (Sweave)
Ideas to consider

➔ Promote brand and distribution: publicly publish evaluation reports and data (as appropriate) on web


➔ IDPE program: add LaTex / R programming content to curriculum (e.g. linear regression, multivariate, measurement, SEM, reproducible research, data visualizations)
Questions or Comments?

The boat was sinking and you could only grab one thing... why R?

R is a powerful, open-source statistical programming language with thousands of user contributed packages. R can solve near any problem!
Getting Started with R

1) Download R here: https://www.r-project.org/
2) Download RStudio (integrated development environment) here: https://www.rstudio.com/
3) TryR quick online tutorial: http://tryr.codeschool.com/
4) Free Coursera Data Science certificate: https://www.coursera.org/specializations/jhu-data-science
5) Hadley Wickham’s e-book: http://adv-r.had.co.nz/
Getting Started with LaTeX

1) Free Online Service: [https://www.sharelatex.com/](https://www.sharelatex.com/)
3) Free editor: [http://www.xm1math.net/texmaker/](http://www.xm1math.net/texmaker/)
4) LaTeX: [https://latex-project.org/ftp.html](https://latex-project.org/ftp.html)