drposter: Generate Academic Posters in R Markdown Based on 'reveal.js' Presentations

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Overview

This template provides a framework to write posters in HTML/CSS using Rmarkdown. The code adapts reveal.js[1] slideshows from the RStudio `revealjs` package,[2,3] allowing fast generation of posters that mostly separate content from presentation. The README.md documentation for the project is actually generated by compiling the poster with `output: github_document` from the `rmarkdown` package; a vignette could be produced in a similar way. A compiled version of this document as a poster is hosted at `<https://github.com/bbucior/drposter/tree/master/inst/example/poster.pdf>`.

Ultimately, one of the main objectives of this project is to avoid manually tweaking the spacing, element-by-element, of content in PowerPoint or another program. Instead, define the desired layout, page size, and other parameters get the spacing details automatically. (work in progress)

Features

Edit content in the *.Rmd and poster.css files to write up your poster and style it. The poster output is best best viewed and printed in Chrome (though limited testing has also been done in Firefox). The previewer built into RStudio has difficulties with the layout CSS, so it is best to refresh the generated html file in a dedicated browser.

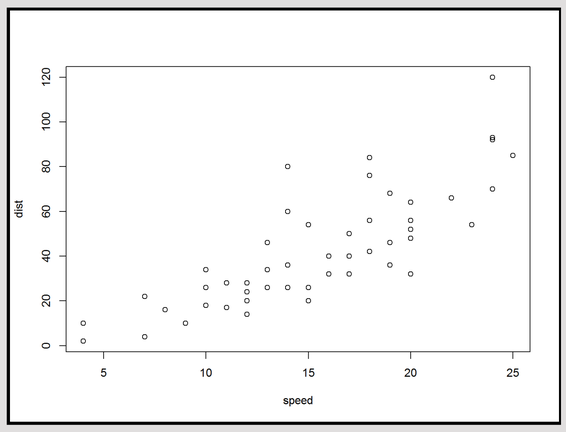
Currently, there are a few conventions to define the poster layout. Use level 1 sections (#) to denote main divisions of content. Assigning a `{.col-x}` class, where x is 1–3, will stretch the container across the page width with x equal subcolumns, using Flexbox. The actual content goes inside of level 2 containers (`## Block title here`). There are also a few convenience classes, such as formatting a QR code block. The markdown source for the poster perhaps provides the best documentation by example.

For now, the title section of the poster is automatically generated from the yaml header in the markdown file. Options for logos or other fields may be added later. By default, the poster is an A0 portrait size, but this is easily adapted at the top of the CSS file (and may gain user-friendly aliases later for size and orientation).

The bibliography is now implemented using the pandoc features suggested by the relevant R markdown documentation[4]. A "references" div is required to place the references at a custom location before the end of the document[5]: see this example document for implementation. See also CSL resources[6] to automatically format references according to your field's conventions, using references specified in the Rmarkdown YAML header or bibtex.

Reproducible research

As an rmarkdown template, this format makes it easy to include plots and other analysis directly generated in R. By default, the raw code is hidden. The following plot of `cars` data is the classic example from R Markdown skeleton files...




```
##      speed           dist
##  Min.   : 4.0   Min.   :  2.00
##  1st Qu.:12.0   1st Qu.: 26.00
##  Median :15.0   Median : 36.00
##  Mean   :15.4   Mean   : 42.98
##  3rd Qu.:19.0   3rd Qu.: 56.00
##  Max.   :25.0   Max.   :120.00
```

...along with the corresponding statistical summary.

Images can also be loaded by file path using the standard Markdown syntax. For example, some figures, such as illustrations, may be easiest in other software or analysis from other software (or collaborators who use different tools). Other standard markdown commands should work out-of-the box, though their CSS styling has not yet been tested.

Possible future directions

- Integration with default reveal.js themes (e.g. sky, moon) to automatically load fonts, colors, and other styles.
- Ideally, this could eventually be transformed into a "print as poster" extension for reveal.js slideshows, so the standard pandoc[7] template for revealjs could be used (including the default CSS and Javascript boilerplate that is currently removed).
- Implement several nice base poster styles similar to the tikzposter LaTeX class[8], which provides full customization of the color palette, block styling, etc.
- Organize styles with SCSS or at least more similarly to standard reveal.js presentations.
- Affiliations: the author list is currently cobbled together and could use an alternative to the *ad hoc* construction. Possibly pandoc's footnote syntax could help?
- Add a more traditional column-based format for academic posters.

Community

This repository is under development and should be considered alpha-level software. **Do not use it directly for academic or professional content without having a proper backup to fully compile your posters.** The CSS classes and/or notation are not finalized and may break without warning.

This package will be updated as I make new posters for research, but it's still a work in progress. Installation of this package is easy using the `devtools` package: simply run `devtools::install_github("bbucior/drposter")`. After installation, the format will be available as an R Markdown template in the "New R Markdown" wizard.

For more information, please visit the project page at `<https://github.com/bbucior/drposter>`. Feel free to report issues, pull requests, or general comments on Github.

References

(1) `<http://lab.hakim.se/reveal-js/#/>`.
(2) `<https://github.com/rstudio/revealjs>`.
(3) `<http://rmarkdown.rstudio.com/developer_custom_formats.html>`.
(4) `<http://rmarkdown.rstudio.com/authoring_bibliographies_and_citations.html>`.
(5) `<https://stackoverflow.com/questions/41532707/include-rmd-appendix-after-references>`.
(6) `<https://github.com/citation-style-language/styles>`.
(7) `<http://pandoc.org/>`.
(8) `<https://www.ctan.org/pkg/tikzposter>`.
(9) `<https://openclipart.org/detail/169900/circuit-board>`.
(10) `<https://www.r-project.org/logo/>`.

Acknowledgements

The background image for the example poster is derived from public domain work.[9] The R logo[10] is copyright 2016 The R Foundation and dual-licensed as CC-BY-SA 4.0 or GPL-2. This package is derived from the excellent reveal.js HTML presentation framework[1] and corresponding R package.[2]