RMarkdown Manuscript Example

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2015/09/10

Overview

RMarkdown (1) documents are simply Markdown documents with chunks of R code embedded in them. When building the document, R code chunks are executed using knitr (2) and the outputs from each code block are embedded in the resulting file.

To parse our example RMarkdown file, instead of calling pandoc directly, we will now use the `render()` function of the rmarkdown library.

For example, to render this file, open up an R console in the directory containing this file and run:

```
library('rmarkdown')
render('04-rmarkdown-manuscript-example.Rmd')
```

You will have to first install rmarkdown if it is not already installed on your system.

RMarkdown figures

Example figure from the ggtree (3, 4) vignette:

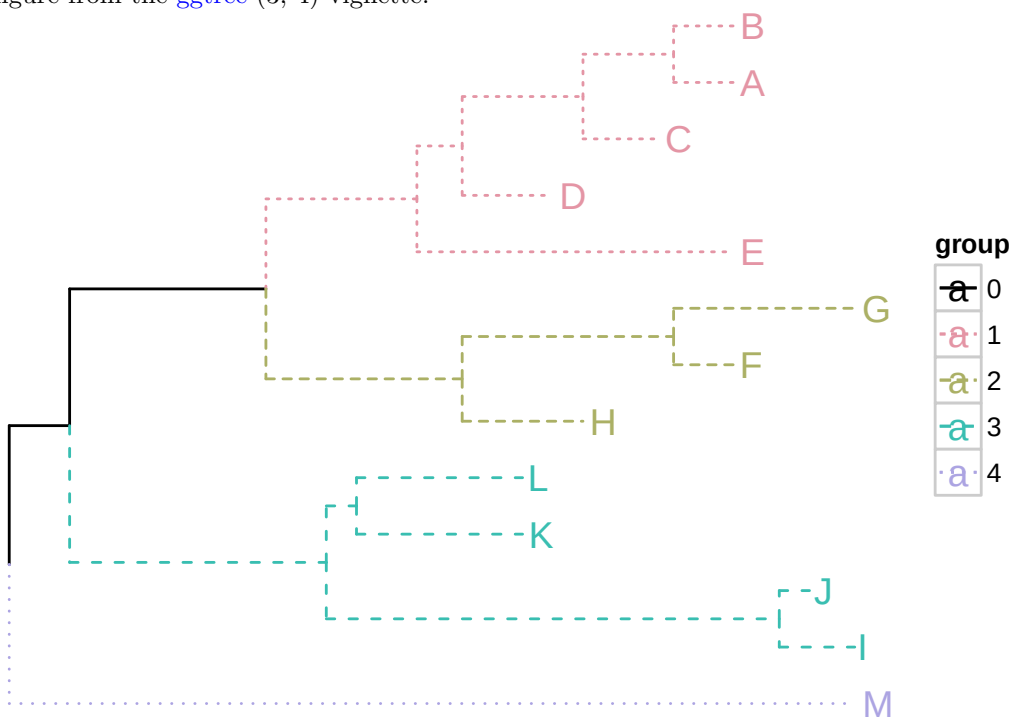

Figure 1: ggtree example figure

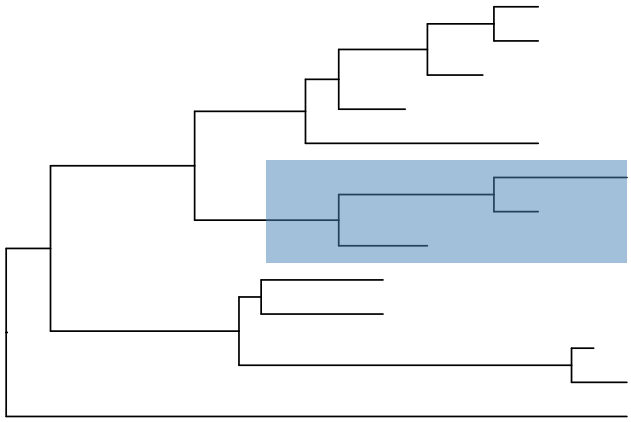

Figure 2: Another example from the ggtree vignette

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```
ggtree(tree) %>% hilight(21, "steelblue")
```

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Some additional tips

Getting BibTeX entries for R packages

To get a BibTeX-formatted reference entry for an R package, use the `citation()` and `toBibtex()` functions:

```
toBibtex(citation('package-name'))
```

Note that you will have to manually add a reference **???** for each entry generated this way.

Set fig_caption: true to ensure that captions show up

Figure captions can be specified in knitr using the `fig.cap` chunk option. To ensure that the captions are displayed properly, however, you will want to set `fig_caption: true` in the YAML header block, under the `pdf_document` section.

Set keep_tex: true to help with debugging

RMarkdown documents are converted to LaTeX first before being converted into PDF and other formats. When debugging formatting, etc. issues, it may be help to enable this option in the `pdf_document` section on the YAML metadata block at the top of your file.

System information

```
sessionInfo()
```

```
## R version 3.2.1 (2015-06-18)
## Platform: x86_64-unknown-linux-gnu (64-bit)
## Running under: Arch Linux
##
## locale:
##  [1] LC_CTYPE=en_US.UTF-8       LC_NUMERIC=C
##  [3] LC_TIME=en_US.UTF-8        LC_COLLATE=en_US.UTF-8
##  [5] LC_MONETARY=en_US.UTF-8    LC_MESSAGES=en_US.UTF-8
##  [7] LC_PAPER=en_US.UTF-8       LC_NAME=C
##  [9] LC_ADDRESS=C               LC_TELEPHONE=C
## [11] LC_MEASUREMENT=en_US.UTF-8 LC_IDENTIFICATION=C
##
## attached base packages:
## [1] stats     graphics  grDevices utils     datasets  methods   base
##
## other attached packages:
## [1] ggplot2_1.0.1    colorspace_1.2-6 rmarkdown_0.8    ggtree_1.0.19
## [5] setwidth_1.0-4   colorout_1.1-0
##
## loaded via a namespace (and not attached):
##  [1] Rcpp_0.12.0         formatR_1.2         plyr_1.8.3
##  [4] XVector_0.8.0       tools_3.2.1         zlibbioc_1.14.0
##  [7] digest_0.6.8        evaluate_0.7.2      jsonlite_0.9.17
## [10] gtable_0.1.2        nlme_3.1-120        lattice_0.20-33
## [13] png_0.1-7           yaml_2.1.13         parallel_3.2.1
## [16] proto_0.3-10        gridExtra_2.0.0     stringr_1.0.0
## [19] knitr_1.11          Biostrings_2.36.4   fftwtools_0.9-7
## [22] S4Vectors_0.6.5     IRanges_2.2.7       locfit_1.5-9.1
## [25] stats4_3.2.1        grid_3.2.1          jpeg_0.1-8
## [28] reshape2_1.4.1      magrittr_1.5        scales_0.3.0
## [31] htmltools_0.2.6     BiocGenerics_0.14.0 MASS_7.3-44
## [34] abind_1.4-3         ape_3.3             EBImage_4.10.1
## [37] tiff_0.1-5          labeling_0.3        stringi_0.5-5
## [40] munsell_0.4.2
```

References

1. Allaire,J., Cheng,J., Xie,Y., McPherson,J., Chang,W., Allen,J., Wickham,H., Atkins,A. and Hyndman,R. (2015) Rmarkdown: Dynamic documents for r.

2. Xie,Y. (2015) Dynamic documents with R and knitr 2nd ed. Chapman; Hall/CRC, Boca Raton, Florida.

3. Yu,G., Smith,D., Zhu,H., Guan,Y. and Lam,T.T.-Y. (submitted) Ggtree: An r package for visualization and annotation of phylogenetic tree with different types of meta-data. *Methods in Ecology and Evolution*.

4. Wickham,H. (2009) Ggplot2: Elegant graphics for data analysis Springer New York.