

R Markdown Template

Your Name

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This is an R Markdown template that outlines minimal reproducibility suggestions for the GWD thesis writers.

Dependencies

Describe any dependencies needed to execute your code.

Data and Folders

Example: The data is stored in the “data.txt” file in the “data” folder.

Any files in the “output” folder that are read in using `readRDS()` should be mentioned here.

System

List any system dependencies needed to execute your code.

```
dependencies:  
- R>=4.1 # https://www.r-project.org/
```

R Packages

Install and load packages simultaneously with the **pacman** package.

```
# Packages  
if (!require(pacman)) install.packages("pacman")  
  
## Loading required package: pacman  
  
pacman::p_load(tidyverse, brms, latex2exp)  
  
# If you get the error "! LaTeX Error: File `framed.sty' not found." when rendering,  
# uncomment and run the following 2 lines.  
#install.packages(c('tinytex', 'rmarkdown'))  
#tinytex::install_tinytex()
```

Code

The code to produce all tables, figures, etc. in your thesis goes here.

Modeling

If you run computationally intensive procedures (e.g., Bayesian hierarchical models, spatial data, etc.), you can use `saveRDS()` and `readRDS()` to save and read back in output.

```
# Example adapted from http://paulbuerkner.com/brms/

fit1 <- brm(count ~ zAge + zBase * Trt + (1 | patient),
            data = epilepsy, family = poisson(), chains = 2,
            iter = 550, cores = 2, warmup = 50)

saveRDS(fit1, "output/fit1.RDS")
```

```
# Extract model output without rerunning each time

fit1 <- readRDS("output/fit1.RDS")
post_sum <- posterior_summary(fit1)
```

Figures

Display your figures in the generated pdf and save them in the “figures” folder for use in your thesis. The **latex2exp** package is useful for figure labels because it allows you type in the LaTeX syntax.

