

# Results Template

A Subtitle

## Contents

<b>Introduction</b>	<b>1</b>
Features . . . . .	2
Installation . . . . .	2
Structure . . . . .	3
Render and Publish . . . . .	3
Contribution . . . . .	3
<b>Packages &amp; Data</b>	<b>3</b>
Packages . . . . .	3
Data . . . . .	3
<b>Descriptive Stats</b>	<b>4</b>
Part 1 . . . . .	4
Part 2 . . . . .	4
Part 3 . . . . .	5
<b>Full Code</b>	<b>5</b>
<b>Package References</b>	<b>6</b>
<b>References</b>	<b>7</b>

## Introduction

This is a template for a data analysis folder that can be easily exported as a **webpage** or as **Supplementary Materials** (e.g., as a word document).

How does it look like? Just like this! The README page of this repository, alongside the webpage and word document, were all created from the index.Rmd file.

This means you can easily **share** your data analysis, either by attaching the **pdf** or **word** file to the publication, or by directly providing the URL of your GitHub repository: the readers can then enjoy your awesome open-access work in a convenient and transparent way.

## Features

- ☒ Rendered as a README page, a published website and a word document
- ☒ APA citations
- ☒ Tidy organisation (separate files for independent analyses)
- ☒ Great default configuration
- ☒ And more!

## Installation

- **How to use this template?**

Download it (**click here to download**), unzip it and edit. Alternatively, you click on the **Use this template** button at the top of this screen to create a GitHub repository with all the content copied (then you just need to clone the repo to your local machine).

- **How to upload it to a website?**

If your repo is not already connected to GitHub, then create a new repository and upload all the content (so that it looks like this repo). Then, go to settings and enable **GitHub pages** (i.e., that gives you a webpage from an html stored on GitHub), and select the **docs/** folder as the location of the webpage. Indeed, rendering (knitting) the files will generate an “index.html” file in the **/docs/** folder, which is used as the website. You can see an example at <https://realitybending.github.io/TemplateResults/>.

- **To knit or not to knit**

In this repo, we have set up a GitHub action that generates all the output files everytime someone commit to the repository. This means that the final documents here are always “up-to-date” with the *Rmds* (as shown by the green badge). That said, you can remove this GitHub action (just remove the `.github/workflows/website.yml` file) if you prefer to generate the documents manually only.

- **But I don’t want to upload all my data**

In that case, you’ll need to 1) deactivate (i.e., remove the action file) the automatic rendering by GitHub (as no data will be stored on GitHub) and 2) mark the **data** folder as “to be ignored” (so that it won’t be uploaded). This can be done by adding **/data/** to the **.gitignore** file (that you can open with a notepad). This means that you can still store the data here locally, and generate the documents accordingly, but the data folder will be ignored by git and never uploaded to GitHub. This way, you can still have a cool website, an open-access script, but the data is safe with you.

- **How to add references?**

References have to be added in **bib** format in the *utils/bibliography.bib* file, and further referenced in the text like this `[@ludecke2019insight]` (Lüdecke, Waggoner, & Makowski, 2019).

- **It doesn’t work / I have questions / I have ideas**

Just **open an issue** and we’ll be happy to assist

## Structure

Most files that you'll need to create / edit will be written in **rmarkdown**, which consists of a mix of markdown text and R chunks of code.

The main file is named **index.Rmd**. However, to avoid having overly long files, the different (and independent) analyses parts are actually split in other documents. For instance, in this template example, the descriptive statistics section is in the **1\_descriptive.Rmd** file. As you can see in the index file, this file is then integrated as a child document (i.e., it is merged). This makes it very convenient to have a clear structure with well-organized files, that are put together only when merged.

## Render and Publish

Importantly, in order to render all the files, do not Knit this document by pressing the 'Knit' button. If you do, it will create an output file (for instance **index.html**) in the root folder, alongside **index.Rmd**. This is **not what we want**, as we want to keep the output files tidy in separate folders (for instance, the html version should be in the **/docs/** folder, as this is where the website will look for).

There an R script, **utils/render.R**, that contains the lines to render everything in its correct location. So, when you have the "index.Rmd" file opened (and your working directory is at its root), simply run **source("utils/render.R")** in the console (or the relevant lines in that file). This will run the rendering file and create all the files.

## Contribution

Do not hesitate to improve this template by updating, documenting, or expanding it!

## Packages & Data

### Packages

```
library(easystats)

summary(report::report(sessionInfo()))
```

The analysis was done using the R Statistical language (v4.0.1; R Core Team, 2020) on Windows 10 x64, using the packages **effectsize** (v0.4.3.1), **ggplot2** (v3.3.2), **stringr** (v1.4.0), **forcats** (v0.5.0), **tidyr** (v1.1.2), **readr** (v1.3.1), **dplyr** (v1.0.3), **rmarkdown** (v2.5), **tibble** (v3.0.5), **purrr** (v0.3.4), **parameters** (v0.11.0.1), **insight** (v0.12.0.1), **see** (v0.6.1), **performance** (v0.6.1.1), **modelbased** (v0.5.1), **easystats** (v0.2.0), **correlation** (v0.5.0.1), **bayestestR** (v0.8.2.1), **report** (v0.2.0) and **tidyverse** (v1.3.0).

### Data

```
df <- read.csv("data/data.csv")

cat(paste("The data consists of",
          report::report_participants(df,
                                     participants = "Participant",
                                     age = "Age")))
```

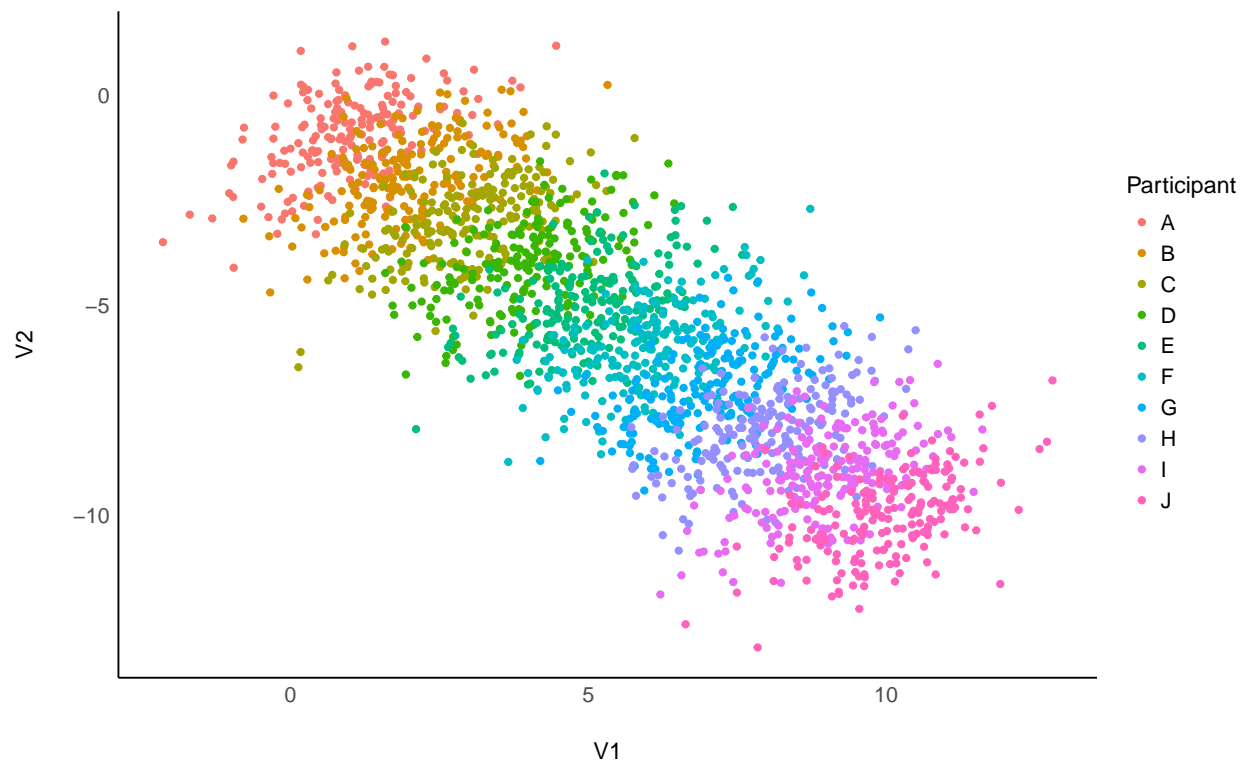
The data consists of 10 participants (Mean age = 29.9, SD = 0.5, range: [29.0, 30.91])

## Descriptive Stats

### Part 1

Here's a cool plot:

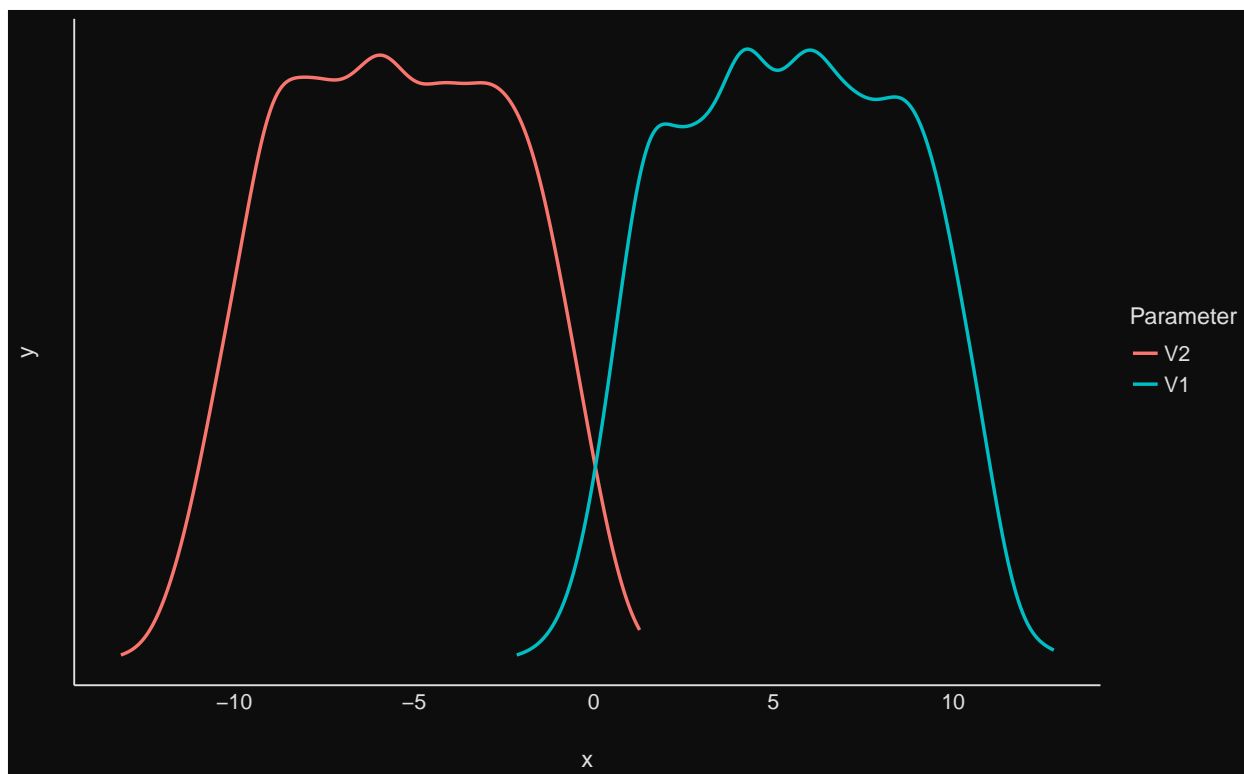
```
ggplot(df, aes(x=V1, y=V2, color=Participant)) +  
  geom_point() +  
  see::theme_modern()
```



### Part 2

That's another great plot:

```
plot(bayestestR::estimate_density(df[c("V1", "V2")))) +  
  see::theme_blackboard()
```



## Part 3

Did you ever hear the tragedy of Darth Plagueis The Wise? I thought not. It's not a story the Jedi would tell you. It's a Sith legend. Darth Plagueis was a Dark Lord of the Sith, so powerful and so wise he could use the Force to influence the midichlorians to create life... He had such a knowledge of the dark side that he could even keep the ones he cared about from dying. The dark side of the Force is a pathway to many abilities some consider to be unnatural. He became so powerful... the only thing he was afraid of was losing his power, which eventually, of course, he did. Unfortunately, he taught his apprentice everything he knew, then his apprentice killed him in his sleep. Ironic. He could save others from death, but not himself.

## Full Code

The full script of executive code contained in this document is reproduced here.

```
# Set up the environment (or use local alternative `source("utils/config.R")`)
source("https://raw.githubusercontent.com/RealityBending/TemplateResults/main/utils/config.R")

fast <- FALSE # Make this false to skip the chunks
if (!knitr::is_latex_output()) {
  knitr::include_graphics("https://github.com/RealityBending/TemplateResults/workflows/Website/badge.svg")
}
library(easystats)

summary(report::report(sessionInfo()))
df <- read.csv("data/data.csv")
```

```
cat(paste("The data consists of",
         report::report_participants(df,
                                     participants = "Participant",
                                     age = "Age")))

report::cite_packages(sessionInfo())
ggplot(df, aes(x=V1, y=V2, color=Participant)) +
  geom_point() +
  see::theme_modern()
plot(bayestestR::estimate_density(df[c("V1", "V2")])) +
  see::theme_blackboard()
```

## Package References

```
report::cite_packages(sessionInfo())
```

- Ben-Shachar M, Lüdtke D, Makowski D (2020). *effectsize: Estimation of Effect Size Indices and Standardized Parameters*. *Journal of Open Source Software*, 5(56), 2815. doi: 10.21105/joss.02815
- H. Wickham. *ggplot2: Elegant Graphics for Data Analysis*. Springer-Verlag New York, 2016.
- Hadley Wickham (2019). *stringr: Simple, Consistent Wrappers for Common String Operations*. R package version 1.4.0. <https://CRAN.R-project.org/package=stringr>
- Hadley Wickham (2020). *forcats: Tools for Working with Categorical Variables (Factors)*. R package version 0.5.0. <https://CRAN.R-project.org/package=forcats>
- Hadley Wickham (2020). *tidyr: Tidy Messy Data*. R package version 1.1.2. <https://CRAN.R-project.org/package=tidyr>
- Hadley Wickham, Jim Hester and Romain Francois (2018). *readr: Read Rectangular Text Data*. R package version 1.3.1. <https://CRAN.R-project.org/package=readr>
- Hadley Wickham, Romain François, Lionel Henry and Kirill Müller (2021). *dplyr: A Grammar of Data Manipulation*. R package version 1.0.3. <https://CRAN.R-project.org/package=dplyr>
- JJ Allaire and Yihui Xie and Jonathan McPherson and Javier Luraschi and Kevin Ushey and Aron Atkins and Hadley Wickham and Joe Cheng and Winston Chang and Richard Iannone (2020). *rmarkdown: Dynamic Documents for R*. R package version 2.5. URL <https://rmarkdown.rstudio.com>.
- Kirill Müller and Hadley Wickham (2021). *tibble: Simple Data Frames*. R package version 3.0.5. <https://CRAN.R-project.org/package=tibble>
- Lionel Henry and Hadley Wickham (2020). *purrr: Functional Programming Tools*. R package version 0.3.4. <https://CRAN.R-project.org/package=purrr>
- Lüdtke D, Ben-Shachar M, Patil I, Makowski D (2020). “parameters: Extracting, Computing and Exploring theParameters of Statistical Models using R.” *Journal of Open Source Software*, 5(53), 2445. doi:10.21105/joss.02445 (URL: <https://doi.org/10.21105/joss.02445>).
- Lüdtke D, Waggoner P, Makowski D (2019). “insight: A Unified Interface to Access Information from ModelObjects in R.” *Journal of Open Source Software*, 4(38), 1412. doi: 10.21105/joss.01412 (URL:<https://doi.org/10.21105/joss.01412>).
- Lüdtke, Ben-Shachar, Waggoner & Makowski (2020). *Visualisation Toolbox for ‘easystats’ and Extra Geoms, Themes and Color Palettes for ‘ggplot2.’* CRAN. Available from <https://easystats.github.io/see/>
- Lüdtke, Makowski, Waggoner & Patil (2020). *Assessment of Regression Models Performance*. CRAN. Available from <https://easystats.github.io/performance/>
- Makowski, D., Ben-Shachar, M. S. & Lüdtke, D. (2020). *Estimation of Model-Based Predictions, Contrasts and Means*. CRAN.
- Makowski, D., Ben-Shachar, M. S. & Lüdtke, D. (2020). *Estimation of Model-Based Predictions, Contrasts and Means*. GitHub.

- Makowski, D., Ben-Shachar, M. S., Patil, I., & Lüdecke, D. (2019). Methods and Algorithms for Correlation Analysis in R. *Journal of Open Source Software*, 5(51), 2306. 10.21105/joss.02306
- Makowski, D., Ben-Shachar, M., & Lüdecke, D. (2019). bayestestR: Describing Effects and their Uncertainty, Existence and Significance within the Bayesian Framework. *Journal of Open Source Software*, 4(40), 1541. doi:10.21105/joss.01541
- Makowski, D., Lüdecke, D., & Ben-Shachar, M.S. (2020). Automated reporting as a practical tool to improve reproducibility and methodological best practices adoption. CRAN. Available from <https://github.com/easystats/report>. doi: .
- R Core Team (2020). R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria. URL <https://www.R-project.org/>.
- Wickham et al., (2019). Welcome to the tidyverse. *Journal of Open Source Software*, 4(43), 1686, <https://doi.org/10.21105/joss.01686>

## References

Lüdecke, D., Waggoner, P. D., & Makowski, D. (2019). Insight: A unified interface to access information from model objects in r. *Journal of Open Source Software*, 4(38), 1412.