

Preparatory Steps and Work Environment

October 31, 2019

1 Preparatory steps

Prior to performing calculations, let us first set up our work environment. Run the following lines of code in an R console:

```
# Creates or reads existing user-specific .Renviron file
user.renviro = path.expand(file.path("~", ".Renviron"))

# Opens user-specific .Renviron file
file.edit(user.renviro)
```

After running this, an .Renviron file will pop up. Specify the location of the folder `examples` and the folder `code`. For example, in a machine running on a Windows OS this could look like:

```
path.input_data = "J:/CountSMART/dat-example-01"
path.code = "J:/CountSMART/code"
```

Now, restart R so that these paths can be loaded into R's namespace.

2 Display session information

To facilitate reproducibility, we display details on the set-up of our work environment when running power calculation computations in illustrative examples below.

```
sessionInfo()

## R version 3.6.1 (2019-07-05)
## Platform: x86_64-w64-mingw32/x64 (64-bit)
## Running under: Windows 10 x64 (build 18362)
##
## Matrix products: default
##
## locale:
##  [1] LC_COLLATE=English_United States.1252
##  [2] LC_CTYPE=English_United States.1252
##  [3] LC_MONETARY=English_United States.1252
##  [4] LC_NUMERIC=C
##  [5] LC_TIME=English_United States.1252
##
## attached base packages:
## [1] parallel stats      graphics  grDevices utils      datasets  methods
## [8] base
##
## other attached packages:
##  [1] ggplot2_3.2.1    geeM_0.10.1      Matrix_1.2-17    mvtnorm_1.0-11
##  [5] rootSolve_1.7    assertthat_0.2.1 purrr_0.3.2      dplyr_0.8.3
##  [9] formatR_1.7      kableExtra_1.1.0 knitr_1.25       rmarkdown_1.15
##
## loaded via a namespace (and not attached):
```

## [1]	Rcpp_1.0.2	pillar_1.4.2	compiler_3.6.1
## [4]	tools_3.6.1	zeallot_0.1.0	digest_0.6.20
## [7]	gtable_0.3.0	lattice_0.20-38	evaluate_0.14
## [10]	tibble_2.1.3	viridisLite_0.3.0	pkgconfig_2.0.2
## [13]	rlang_0.4.0	rstudioapi_0.10	yaml_2.2.0
## [16]	xfun_0.9	withr_2.1.2	stringr_1.4.0
## [19]	httr_1.4.1	xml2_1.2.2	vctrs_0.2.0
## [22]	hms_0.5.1	grid_3.6.1	webshot_0.5.1
## [25]	tidyselect_0.2.5	glue_1.3.1	R6_2.4.0
## [28]	readr_1.3.1	magrittr_1.5	backports_1.1.4
## [31]	scales_1.0.0	htmltools_0.3.6	rvest_0.3.4
## [34]	colorspace_1.4-1	stringi_1.4.3	lazyeval_0.2.2
## [37]	munsell_0.5.0	crayon_1.3.4	