HW 1 - AA

CJK

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## R Markdown

Homework Assignment 1 for Advanced Analytics:

Step one is to set the seed for the sake of randomness!

knitr::opts\_chunk$set(cache.extra = knitr::rand\_seed)

Next sstep is to ensure all the needed packages are installed and called into the library. This should include the ‘haven’ package in order to properly import the .sav file (SPSS file) The ‘pacman’ package will install any packages on the list not already installed and call all packages into the library

tryCatch(require(pacman),finally=utils:::install.packages(pkgs='pacman',repos='http://cran.r-project.org'));

## Loading required package: pacman

##   
## The downloaded binary packages are in  
## /var/folders/\_6/7mn81ts936g1klwprl9hyq7m0000gn/T//RtmpMVv1mC/downloaded\_packages

require(pacman)  
  
pacman::p\_load(Hmisc,  
 checkmate,  
 corrr,  
 conflicted,  
 readxl,  
 dplyr,  
 tidyr,  
 ggplot2,  
 knitr,  
 evaluate,  
 iopsych,  
 psych,  
 quantreg,  
 lavaan,  
 xtable,  
 reshape2,  
 GPArotation,  
 Amelia,  
 # esquisse,  
 expss,  
 multilevel,  
 janitor,  
 mice,  
 lmtest,  
 haven,  
 tidylog  
)  
  
#' <!-- #Loading from GitHub -->  
#' <!-- #pacman::p\_load\_current\_gh("trinker/lexicon", "trinker/sentimentr") -->

The last package should be ‘tidylog’ and it’s optional but useful to provide a log of information and feedback about different ‘diplyr’ and ‘tidyr’ functions that are used!

Now we’re all ready to load the dataset into R. The ‘some-pig’ project should (fingers crossed) be connected to my GitHub repository to make this process available through GitHub as well as R. I’m loading the data as ‘hwdata’

hwdata <- read\_sav("~/Documents/DirectoryR/UGA IOMP 2023 AA/some-pig/HW 1/SAQ.sav")

Now that the dataset is loaded, I want to get some broad overview information about the data.

summary(hwdata)

## Question\_01 Question\_02 Question\_03 Question\_04   
## Min. :1.000 Min. :1.000 Min. :1.000 Min. :1.000   
## 1st Qu.:2.000 1st Qu.:1.000 1st Qu.:2.000 1st Qu.:2.000   
## Median :2.000 Median :1.000 Median :3.000 Median :3.000   
## Mean :2.374 Mean :1.623 Mean :2.585 Mean :2.786   
## 3rd Qu.:3.000 3rd Qu.:2.000 3rd Qu.:3.000 3rd Qu.:3.000   
## Max. :5.000 Max. :5.000 Max. :5.000 Max. :5.000   
## Question\_05 Question\_06 Question\_07 Question\_08   
## Min. :1.000 Min. :1.000 Min. :1.000 Min. :1.000   
## 1st Qu.:2.000 1st Qu.:1.000 1st Qu.:2.000 1st Qu.:2.000   
## Median :3.000 Median :2.000 Median :3.000 Median :2.000   
## Mean :2.722 Mean :2.227 Mean :2.924 Mean :2.237   
## 3rd Qu.:3.000 3rd Qu.:3.000 3rd Qu.:4.000 3rd Qu.:3.000   
## Max. :5.000 Max. :5.000 Max. :5.000 Max. :5.000   
## Question\_09 Question\_10 Question\_11 Question\_12   
## Min. :1.000 Min. :1.000 Min. :1.000 Min. :1.000   
## 1st Qu.:2.000 1st Qu.:2.000 1st Qu.:2.000 1st Qu.:3.000   
## Median :3.000 Median :2.000 Median :2.000 Median :3.000   
## Mean :2.846 Mean :2.281 Mean :2.255 Mean :3.159   
## 3rd Qu.:4.000 3rd Qu.:3.000 3rd Qu.:3.000 3rd Qu.:4.000   
## Max. :5.000 Max. :5.000 Max. :5.000 Max. :5.000   
## Question\_13 Question\_14 Question\_15 Question\_16   
## Min. :1.000 Min. :1.000 Min. :1.000 Min. :1.000   
## 1st Qu.:2.000 1st Qu.:2.000 1st Qu.:2.000 1st Qu.:2.000   
## Median :2.000 Median :3.000 Median :3.000 Median :3.000   
## Mean :2.449 Mean :2.876 Mean :2.766 Mean :2.879   
## 3rd Qu.:3.000 3rd Qu.:3.000 3rd Qu.:3.000 3rd Qu.:3.000   
## Max. :5.000 Max. :5.000 Max. :5.000 Max. :5.000   
## Question\_17 Question\_18 Question\_19 Question\_20   
## Min. :1.000 Min. :1.000 Min. :1.000 Min. :1.000   
## 1st Qu.:2.000 1st Qu.:2.000 1st Qu.:1.000 1st Qu.:3.000   
## Median :2.000 Median :2.000 Median :2.000 Median :4.000   
## Mean :2.467 Mean :2.569 Mean :2.292 Mean :3.624   
## 3rd Qu.:3.000 3rd Qu.:3.000 3rd Qu.:3.000 3rd Qu.:4.000   
## Max. :5.000 Max. :5.000 Max. :5.000 Max. :5.000   
## Question\_21 Question\_22 Question\_23 FAC1\_1   
## Min. :1.000 Min. :1.000 Min. :1.000 Min. :-3.10373   
## 1st Qu.:2.000 1st Qu.:2.000 1st Qu.:3.000 1st Qu.:-0.69008   
## Median :3.000 Median :3.000 Median :4.000 Median :-0.07904   
## Mean :3.171 Mean :2.888 Mean :3.434 Mean : 0.00000   
## 3rd Qu.:4.000 3rd Qu.:4.000 3rd Qu.:4.000 3rd Qu.: 0.65248   
## Max. :5.000 Max. :5.000 Max. :5.000 Max. : 4.60083   
## FAC2\_1 FAC3\_1 FAC4\_1 FAC1\_2   
## Min. :-2.5530 Min. :-3.0874 Min. :-3.231645 Min. :-3.17112   
## 1st Qu.:-0.6801 1st Qu.:-0.5885 1st Qu.:-0.711371 1st Qu.:-0.69145   
## Median :-0.1712 Median :-0.1170 Median : 0.000857 Median :-0.06044   
## Mean : 0.0000 Mean : 0.0000 Mean : 0.000000 Mean : 0.00000   
## 3rd Qu.: 0.5419 3rd Qu.: 0.4734 3rd Qu.: 0.678753 3rd Qu.: 0.64106   
## Max. : 3.7057 Max. : 4.3461 Max. : 3.433388 Max. : 4.48099   
## FAC2\_2 FAC3\_2 FAC4\_2   
## Min. :-3.310160 Min. :-2.3033 Min. :-4.1028   
## 1st Qu.:-0.703546 1st Qu.:-0.6682 1st Qu.:-0.5066   
## Median :-0.005424 Median :-0.1888 Median : 0.1579   
## Mean : 0.000000 Mean : 0.0000 Mean : 0.0000   
## 3rd Qu.: 0.668124 3rd Qu.: 0.5281 3rd Qu.: 0.5814   
## Max. : 3.458260 Max. : 3.6224 Max. : 2.8292