Rmarkdown exercise

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Available books links

Intro2R

Rmarkdown, the definitive guide

Rmarkdown exercise

```r
install.packages("rmarkdown")
install.packages("tinytex")
tinytex::install_tinytex() # Tinytex is requred for PDF format
library(rmarkdown)
```

Packages for Rmarkdown

```r
dir.create("output") # Create directory
dir.create("./output/figures")
unzip("all_data.zip") # Unzip ZIP file
list.files() # List files on current directory
list.dirs() # List directories on current directory
```

Create, list and extract directories and files

Import data and visualize data structure   I am familiar with these sort of commands and I use them often on my current PhD project. For this reason I do not go into detail.

```r
pathways <- read.table(file = "Data/dataset_overview_pathways.txt", sep = "\t", header = T, stringsAsFa
```

`summary()` returns some measures of central tendency of the variables of the data set, whereas `str()` only returns the column names and their data type.

```
str(pathways)
```

```
## 'data.frame':    15 obs. of  6 variables:
##  $ X   : Factor w/ 15 levels "common_other_pways",..: 11 15 10 3 2 12 1 7 4 5 ...
##  $ OXTP: num  204 138 66 4 6 ...
##  $ DOPP: num  167 75 71 2 1 ...
##  $ SERP: num  143 71 71 2 16 ...
##  $ STEP: num  31 31 19 0 0 ...
##  $ VT.R: num  7 7 0 0 0 ...
```

```
summary(pathways)
```

```
##                       X          OXTP               DOPP
##  common_other_pways  :1   Min.   :  0.0067   Min.   :  0.00605
##  discarded_(coverage) :1   1st Qu.:  6.5000   1st Qu.:  3.00000
##  discarded_(full STOP):1   Median :109.0000   Median : 75.00000
##  FEL_pos_genes        :1   Mean   :137.9420   Mean   : 87.07470
##  M7_pos_genes         :1   3rd Qu.:179.5000   3rd Qu.:128.00000
##  mean omega_FEL       :1   Max.   :579.0000   Max.   :293.00000
##  (Other)              :9
##       SERP              STEP               VT.R
##  Min.   :  0.00731   Min.   :  0.00000   Min.   : 0.000
##  1st Qu.: 12.00000   1st Qu.:  0.00543   1st Qu.: 0.000
##  Median : 68.00000   Median : 26.00000   Median : 5.000
##  Mean   : 78.07703   Mean   : 32.08875   Mean   : 5.083
##  3rd Qu.:107.50000   3rd Qu.: 31.00000   3rd Qu.: 7.000
##  Max.   :256.00000   Max.   :155.00000   Max.   :20.000
##
```

Rmarkdown language

- `< Ctr + Alt + I >` opens a chunk of code
- `echo = FALSE` can be added next to the `{r}` at the chunks of code that do not need to be shown.
- `eval = FALSE` can be added next to the `{r}` at the chunks of code that do not need to be run at knitting.
- Introducing images: `![image](path){width=???px, height=???px}`

Create Version Control

Download Git needs to be installed in the computer. To check if it is installed, the following can be typed in the R terminal: `git --version`. Here is the link for downloading it.

Configure In the terminal of the computer, this needs to be typed: `git config --global user.email 'you@youremail.com' git config --global user.name 'Your Name'`