KID
Function

Fabian Blasch

16.08.2021

Packages

```
# git install opencv
# devtools::install_github("ropenscilabs/opencv", force = T)

# Packages
get.package <- function(package){

  lapply(package, \(x){
    # check if packages are installed and if not install them
    if(!require(x, character.only = T)){
       install.packages(x)
    }
    # call package
    library(x, character.only = T)
  })

}

# exec
get.package(c("png", "jpeg", "tabulizer", "pdftools", "raster", "rgdal", "sp",
              "cluster"))




# since I will use Map() / lapply() alot for plotting I will wrap them in invisible()
invis.Map <- function(f, ...) invisible(Map(f, ...))
invis.lapply <- function(x, f, ...) invisible(lapply(x, f, ...))
```

Actual SSRI

We can obtain the actual SSRI from the file name. Later this data can then be used to evaluate the classification accuracy of our methods.

```
# set
setwd("C:/Users/blasc/OneDrive/Documents/GitHub/KID/KIDs")

# files
file_names <- list.files(pattern = ".pdf", recursive = T)
```

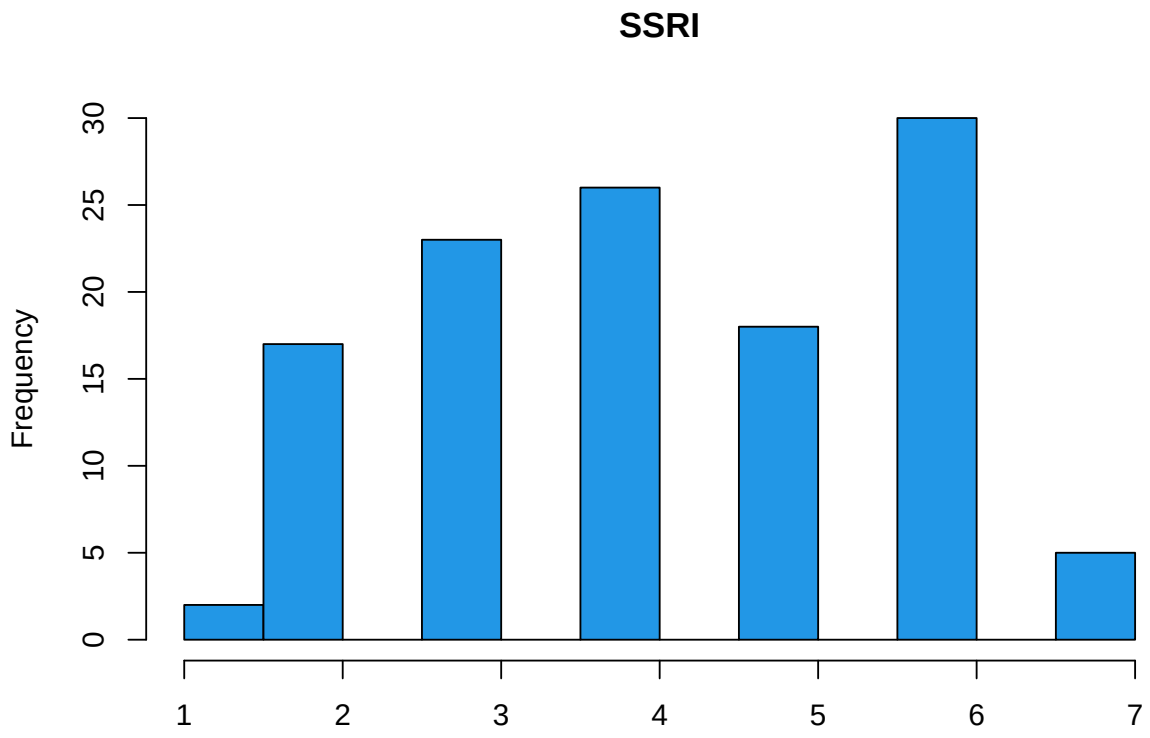
```r
# create df
dat.valid.SSRI <- cbind("KID" = file_names,
                        "SSRI" = sapply(strsplit(sapply(strsplit(file_names, "_", fixed = T),
                                                        function(x) x[length(x)]), ".", fixed = T), "[", 1))

# glimpse
head(dat.valid.SSRI, 7)
```

```
##      KID                         SSRI
## [1,] "Allianz/ki-allakt_6.pdf" "6"
## [2,] "Allianz/ki-allap_6.pdf"  "6"
## [3,] "Allianz/ki-alleur_2.pdf" "2"
## [4,] "Allianz/ki-allna_6.pdf"  "6"
## [5,] "Allianz/ki-allnar_2.pdf" "2"
## [6,] "Allianz/ki-allore_3.pdf" "3"
## [7,] "Allianz/ki-allost_6.pdf" "6"
```

```r
# dim
dim(dat.valid.SSRI)
```

```
## [1] 121   2
```

```r
# Hist
hist(as.numeric(dat.valid.SSRI[, 2]), breaks = 10, main = "SSRI", col = 4, xlab = "")
```



Shade Color

To extract the SSRI the following colors are required and need to be converted to hex.

```
# set
setwd("C:/Users/blasc/OneDrive/Documents/GitHub/KID/KIDs/Auxiliary")

# import
dat.col.KAG <- read.table(list.files(pattern = "RGB"),
                          col.names = c("KAG", "R", "G", "B"))

# add hex
sapply(as.data.frame(t(dat.col.KAG[, -1])),
       function(x) do.call( rgb, as.list(c(x, maxColorValue = 255)))) -> HEX

# bind
dat.col.KAG <- cbind(dat.col.KAG, "HEX" = HEX)

# display
dat.col.KAG
```

```
##               KAG   R   G   B     HEX
## V1     Raiffeisen   0  82 140 #00528C
## V2        Allianz 166 166 166 #A6A6A6
## V3         Amundi 204 210 219 #CCD2DB
## V4          Erste 166 166 166 #A6A6A6
## V5            IQAM 128 128 128 #808080
## V6          Kepler 204 204 204 #CCCCCC
## V7   Masterinvest  99 177 229 #63B1E5
## V8  Schoellerbank 217 217 217 #D9D9D9
## V9       Security 193 193 193 #C1C1C1
## V10         Union 196 197 199 #C4C5C7
```