Packages in R Programming

(Note single and quote character while copying script from word to R)

Packages in R

R packages are a collection of R functions, compiled code and sample data. They are stored under a directory called "library"in the R environment. By default, R installs a set of packages during installation. More packages are added later, when they are needed for some specific purpose. When we start the R console, only the default packages are available by default. Other packages which are already installed have to be loaded explicitly to be used by the R program that is going to use them

List of Available Packages at CRAN site (default)

https://cran.r-project.org/web/packages/available_packages_by_name.html

Library Location of Packages

.libPaths()

Get the list of all the packages installed

library()

Get all packages currently loaded in the R environment

search()

Load Package

- Loading has to be done one by one. Packages will try to load all depend packages and if NA, will give error
  library(packagename)

Install Packages

Check Version of R

version()

Single Package

install.packages("Package Name")

Install the package named "XML"

install.packages('XML')

Multiple Packages

- **Manual Method**
  install.packages('dplyr', 'plyr')

- **Using Function**
  Write a function to install multiple Packages. The function will check if the package is already installed and then only installed the missing packages

```
# Make a list of packages to be installed
ipak <- function(pkg){
  new.pkg <- pkg[!(pkg %in% installed.packages()[, "Package"])]
  if (length(new.pkg))
    install.packages(new.pkg, dependencies = TRUE)
  sapply(pkg, require, character.only = TRUE)
}
```

```
packagelist <- c('NLP','tm', 'lubridate')
ipak(packagelist)
```

```
#  package lists
pkg1 = c('dplyr','plyr', 'data.table','xlsx', 'Hmisc','rJava','ggplot2','lattice','gsheet','curl','stringr',
'syuzhet','e10171', 'catools','caret', 'olsrr' ,'swirl','sqldf','XML','VIM',
```

```
'outliers','car','MASS','DMwR','rvest')
pkg2 = c('forecast','rpart', 'rpart.plot', 'partykit','strucchange', 'didrooRFM')
pkg3 = c('zoo', 'astsa','lubridate','timeSeries','tseries','xts')
pkg4 = c('arules' , 'arulesViz')
pkg5 = c('twitterR','ROAuth','RGtk2','RTextTools','wordcloud')
```

```
ipak(pkg1)  # one by install the packages  eg ipak(pkg2)
```

● **Packages (Other Repositories)**

```
install.packages("CHAID", repos="http://R-Forge.R-project.org")
```

Update Packages

```
# list all packages where an update is available
old.packages()

# update all available packages
update.packages()

# update, without prompts for permission/clarification
update.packages(ask = FALSE)
```