importar-datos.R

Usuario

2025-08-21

```
#eduardo
#21/08/2025
#semana 3

# importar datos ------------------------------------------------------------
temperatura <- read.csv("C:/Repositorios/Posgrado_Estadistica_2025/temperatura.csv")
View(temperatura)

head(temperatura) #primeras 6 filas
```

```
##    Año  Ene  Feb  Mar  Abr  May  Jun  Jul  Ago  Sep  Oct  Nov  Dic
## 1 2000 22.5 18.9 19.4 14.0 16.0 22.0 15.0 13.4 18.8 12.4 22.9 21.1
## 2 2001 19.3 20.3 18.5 24.1 17.5 29.4 17.2 22.6 16.2 17.8 25.7 20.2
## 3 2002 23.2 12.9 12.6 26.8 24.6 20.9 20.5 21.5 15.6 24.3 24.8 16.7
## 4 2003 27.6 17.3 16.4 19.6 21.6 21.3 17.5 21.3 15.9 21.1 23.3 30.7
## 5 2004 18.8 20.6 17.7 25.0 17.4 19.6 12.2 21.7 19.6 13.8 18.4 23.2
## 6 2005 18.8 14.2 25.3 21.8 22.6 10.4 20.3 16.6 21.7 20.9 23.8  9.9
```

```
dim(temperatura) #numero de columnas primero filas luego columnas
```

```
## [1] 21 13
```

```
names(temperatura) #nombres de columnas
```

```
##  [1] "Año" "Ene" "Feb" "Mar" "Abr" "May" "Jun" "Jul" "Ago" "Sep" "Oct" "Nov"
## [13] "Dic"
```

```
str(temperatura) #estructura del data frame
```

```
## 'data.frame':    21 obs. of  13 variables:
##  $ Año: int  2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 ...
##  $ Ene: num  22.5 19.3 23.2 27.6 18.8 18.8 27.9 23.8 17.7 22.7 ...
##  $ Feb: num  18.9 20.3 12.9 17.3 20.6 14.2 21.9 17 18.5 17 ...
##  $ Mar: num  19.4 18.5 12.6 16.4 17.7 25.3 21.7 11.2 21.6 18.1 ...
##  $ Abr: num  14 24.1 26.8 19.6 25 21.8 16.8 21.8 27.7 19.8 ...
##  $ May: num  16 17.5 24.6 21.6 17.4 22.6 20.5 24.8 16.5 18.4 ...
##  $ Jun: num  22 29.4 20.9 21.3 19.6 10.4 19.9 20.3 32.3 19 ...
##  $ Jul: num  15 17.2 20.5 17.5 12.2 20.3 14.7 22.4 15.4 27.7 ...
##  $ Ago: num  13.4 22.6 21.5 21.3 21.7 16.6 21.2 21.5 16.4 29.3 ...
```

```
##  $ Sep: num  18.8 16.2 15.6 15.9 19.6 21.7 21.4 24.1 20.1 27.3 ...
##  $ Oct: num  12.4 17.8 24.3 21.1 13.8 20.9 21.9 15.6 20.8 20.3 ...
##  $ Nov: num  22.9 25.7 24.8 23.3 18.4 23.8 16.1 18.8 17.6 20.4 ...
##  $ Dic: num  21.1 20.2 16.7 30.7 23.2 9.9 20.9 16.7 24.3 16 ...
```

```
summary(temperatura) #resumen estadistico
```

```
##       Año            Ene             Feb             Mar             Abr       
##  Min.   :2000   Min.   :10.40   Min.   :10.2   Min.   :11.20   Min.   : 6.90  
##  1st Qu.:2005   1st Qu.:17.20   1st Qu.:14.7   1st Qu.:16.60   1st Qu.:18.50  
##  Median :2010   Median :18.80   Median :18.9   Median :18.50   Median :20.50  
##  Mean   :2010   Mean   :19.53   Mean   :18.6   Mean   :19.25   Mean   :20.53  
##  3rd Qu.:2015   3rd Qu.:22.70   3rd Qu.:21.0   3rd Qu.:21.70   3rd Qu.:24.10  
##  Max.   :2020   Max.   :27.90   Max.   :29.3   Max.   :25.30   Max.   :27.80  
##       May             Jun             Jul             Ago             Sep       
##  Min.   :12.70   Min.   :10.4   Min.   :12.0   Min.   :13.40   Min.   :14.60  
##  1st Qu.:17.40   1st Qu.:19.6   1st Qu.:15.0   1st Qu.:16.60   1st Qu.:16.20  
##  Median :18.40   Median :21.3   Median :18.4   Median :21.70   Median :19.60  
##  Mean   :18.88   Mean   :21.6   Mean   :18.8   Mean   :21.26   Mean   :20.43  
##  3rd Qu.:21.30   3rd Qu.:24.0   3rd Qu.:21.3   3rd Qu.:23.90   3rd Qu.:22.40  
##  Max.   :24.80   Max.   :32.3   Max.   :27.7   Max.   :29.50   Max.   :33.60  
##       Oct             Nov             Dic       
##  Min.   :12.40   Min.   :10.70   Min.   : 9.90  
##  1st Qu.:15.60   1st Qu.:16.40   1st Qu.:16.70  
##  Median :21.10   Median :20.30   Median :20.20  
##  Mean   :20.67   Mean   :20.16   Mean   :20.08  
##  3rd Qu.:22.60   3rd Qu.:23.40   3rd Qu.:23.20  
##  Max.   :39.30   Max.   :31.60   Max.   :30.70
```

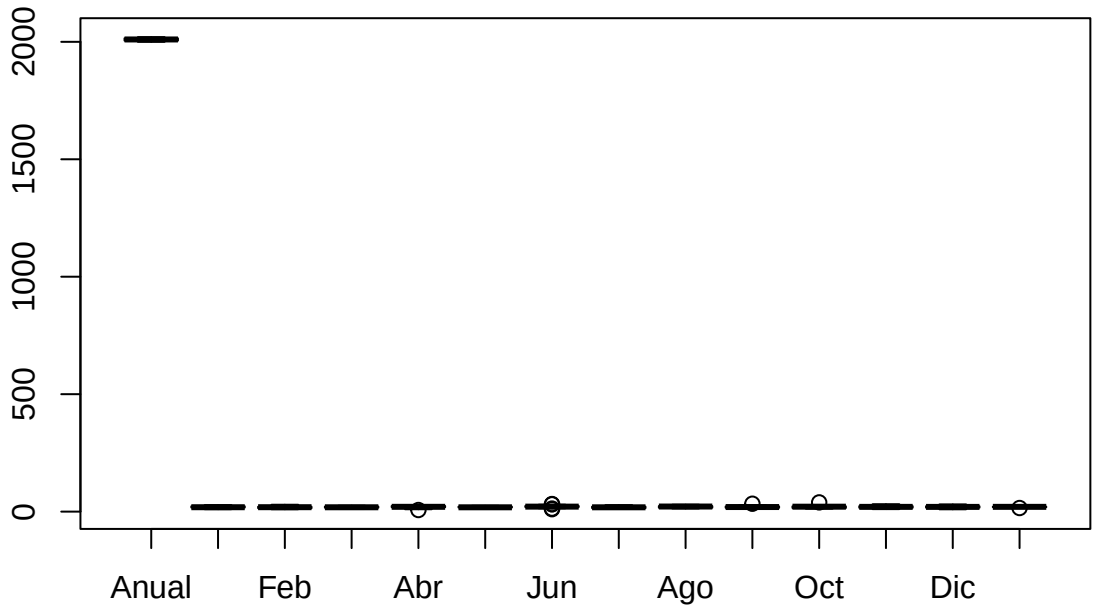
```
names(temperatura) <- c("Anual","Ene",
                        "Feb","Mar","Abr","May","Jun","Jul","Ago","Sep",
                        "Oct","Nov","Dic") #corregir nombre de columna

temperatura$media_anual <- rowMeans(temperatura[,2:13])

head(temperatura)
```

```
##   Anual  Ene  Feb  Mar  Abr  May  Jun  Jul  Ago  Sep  Oct  Nov  Dic media_anual
## 1  2000 22.5 18.9 19.4 14.0 16.0 22.0 15.0 13.4 18.8 12.4 22.9 21.1    18.03333
## 2  2001 19.3 20.3 18.5 24.1 17.5 29.4 17.2 22.6 16.2 17.8 25.7 20.2    20.73333
## 3  2002 23.2 12.9 12.6 26.8 24.6 20.9 20.5 21.5 15.6 24.3 24.8 16.7    20.36667
## 4  2003 27.6 17.3 16.4 19.6 21.6 21.3 17.5 21.3 15.9 21.1 23.3 30.7    21.13333
## 5  2004 18.8 20.6 17.7 25.0 17.4 19.6 12.2 21.7 19.6 13.8 18.4 23.2    19.00000
## 6  2005 18.8 14.2 25.3 21.8 22.6 10.4 20.3 16.6 21.7 20.9 23.8  9.9    18.85833
```

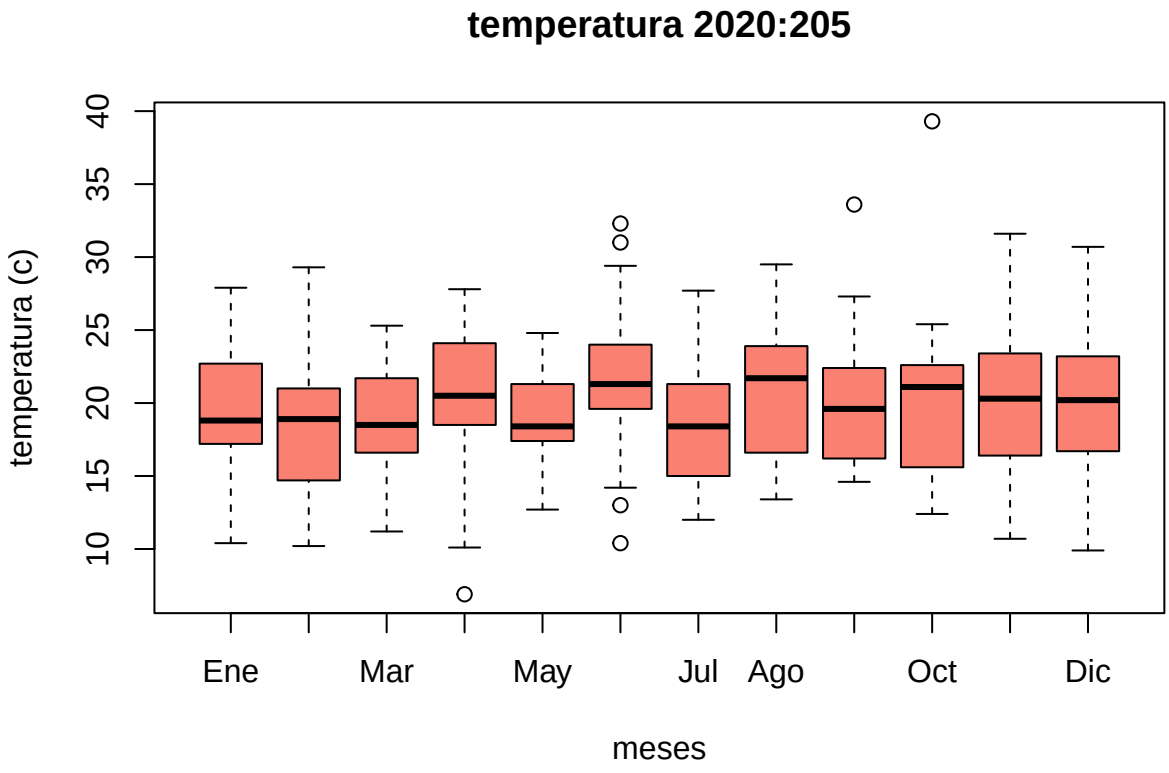
```
temp <-  temperatura [ ,2:13]
temperatura[2,2]
```

```
## [1] 19.3
```

```r
boxplot(temperatura)
```




```r
colores <- c("navajowhite","salmon","red")

boxplot(temp ,col = "salmon", main= "temperatura 2020:205",
      xlab = "meses",
      ylab= "temperatura (c)")
```




```
temperatura$media_anual <- round(rowMeans(temperatura[,2:13]),)
head(temperatura)
```

```
##   Anual  Ene  Feb  Mar  Abr  May  Jun  Jul  Ago  Sep  Oct  Nov  Dic media_anual
## 1  2000 22.5 18.9 19.4 14.0 16.0 22.0 15.0 13.4 18.8 12.4 22.9 21.1          18
## 2  2001 19.3 20.3 18.5 24.1 17.5 29.4 17.2 22.6 16.2 17.8 25.7 20.2          21
## 3  2002 23.2 12.9 12.6 26.8 24.6 20.9 20.5 21.5 15.6 24.3 24.8 16.7          20
## 4  2003 27.6 17.3 16.4 19.6 21.6 21.3 17.5 21.3 15.9 21.1 23.3 30.7          21
## 5  2004 18.8 20.6 17.7 25.0 17.4 19.6 12.2 21.7 19.6 13.8 18.4 23.2          19
## 6  2005 18.8 14.2 25.3 21.8 22.6 10.4 20.3 16.6 21.7 20.9 23.8  9.9          19
```

```
write.csv(temperatura, "temp_final.csv")

temp <- temperatura[,2:13]
temp10 <- temperatura[11:21,2:13]
temperatura[2,2]
```

```
## [1] 19.3
```

```
# importar datos web ------------------------------------------------------


url <- "https://repodatos.atdt.gob.mx/api_update/senasica/actividades_inspeccion_movilizacion/29_activi
```

```r
url2 <- paste("https://repodatos.atdt.gob.mx/api_update/senasica/",
"actividades_inspeccion_movilizacion/",
"29_actividades-inspeccion-movilizacion.csv"
)


senacia <-read.csv(url,header=T)
read.csv("https://repodatos.atdt.gob.mx/api_update/senasica/actividades_inspeccion_movilizacion/29_acti
```

```
##                pvif entidad_federativa     temporalidad   vci   vpi   vli    ci
## 1          Altamira         Tamaulipas Primer trimestre  1105 10875    41  1105
## 2          Catazaja            Chiapas Primer trimestre  3743     0     0  3743
## 3           Huixtla            Chiapas Primer trimestre  8930  7983 11317  8930
## 4        Trinitaria            Chiapas Primer trimestre  2464  2406  4438  2464
## 5      Cosamaloapan           Veracruz Primer trimestre  6733     0     0  6733
## 6       El Tepetate         Nuevo León Primer trimestre  2643   325 12767  2643
## 7         La Concha            Sinaloa Primer trimestre  1496  5856 16809  1496
## 8      La Concha II            Sinaloa Primer trimestre  4795 14796 26807  4795
## 9      Las Tamacuas           Guerrero Primer trimestre   614     0     0   614
## 10        Maravatio          Michoacán Primer trimestre  1359     0     0  1359
## 11 Nuevo Campechito           Campeche Primer trimestre  5374   146  2558  5374
## 12          Paraiso            Chiapas Primer trimestre  4727  2915   483  4727
## 13     PMSE La Coma         Tamaulipas Primer trimestre 22014     0     0 22014
## 14   Santa Adelaida           Campeche Primer trimestre  8368  2293  2478  8368
## 15      Santa Clara            Durango Primer trimestre  6606  6379     1  6606
## 16 Tanque Escondido           Coahuila Primer trimestre  2082  1845    10  2082
## 17           Tonala            Tabasco Primer trimestre 11373   291  1490 11373
## 18             Tula         Tamaulipas Primer trimestre  4428  2039  4181  4428
## 19 Vicente Guerrero            Durango Primer trimestre  1705  3711   985  1705
##      cai  cpi oci crsr crsd
## 1    665  440   0    4   11
## 2      0 3743   0   40    0
## 3   7743 1076 111   10    8
## 4   2121  246  97    2    0
## 5      0 6733   0   29    0
## 6    974 1669   0   21    5
## 7   1386  108   2    3    4
## 8   3191 1601   3   30   23
## 9      0  614   0    0    0
## 10    29 1330   0    1    0
## 11  1514 3858   2    5    2
## 12  3869  858   0    0    1
## 13 21948   64   2    0    0
## 14  2733 5611  24   15   12
## 15  1560 5045   1   13    7
## 16   503 1578   1   24   13
## 17  2141 9232   0   20    0
## 18  4030  390   8    4    3
## 19   469 1233   3    7    4
```

```r
senacica <-read.csv(url,header=T)
View(senacica)
```