Clase 2

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Documentos csv

comma separate values

read.csv

Funciones que leen .csv

- `read.csv(file_path)`
- `read_csv(file_path)`

Argumentos de la función

```
read.csv(file, header = TRUE, sep = ",", quote = "\"", dec = ".", fill = TRUE, comment.char
= "", ...)
```

```
read.csv2(file, header = TRUE, sep = ";", quote = "\"", dec = ",", fill = TRUE, comment.char
= "", ...)
```

Tambien podemos leer archivos separados por espacio y tabuladores:

```
read.table(file, header = FALSE, sep = "", quote = "\"'", dec = ".", numerals = c("allow.loss",
"warn.loss", "no.loss"), row.names, col.names, as.is = !stringsAsFactors, na.strings =
"NA", colClasses = NA, nrows = -1, skip = 0, check.names = TRUE, fill = !blank.lines.skip,
strip.white = FALSE, blank.lines.skip = TRUE, comment.char = "#", allowEscapes = FALSE,
flush = FALSE, stringsAsFactors = default.stringsAsFactors(), fileEncoding = "", encoding
= "unknown", text, skipNul = FALSE)
```

```
read.delim(file, header = TRUE, sep = "\t", quote = "\"", dec = ".", fill = TRUE, comment.char
= "", ...)
```

```
read.delim2(file, header = TRUE, sep = "\t", quote = "\"", dec = ",", fill = TRUE, comment.char
= "", ...)
```

Ejemplo para leer un archivo .csv

```
names_data <- c("age", "sex", "cp", "trestbps", "chol", "fbs", "restecg",
                "thalach", "exang", "oldpeak", "slope", "ca", "thal", "num")
data_cleveland <- read.csv("Datasets/processed.cleveland.data")
colnames(data_cleveland) <- names_data

str(data_cleveland)
```

```
## 'data.frame':    302 obs. of  14 variables:
##  $ age     : num  67 67 37 41 56 62 57 63 53 57 ...
##  $ sex     : num  1 1 1 0 1 0 0 1 1 1 ...
##  $ cp      : num  4 4 3 2 2 4 4 4 4 4 ...
```

```
##  $ trestbps: num  160 120 130 130 120 140 120 130 140 140 ...
##  $ chol    : num  286 229 250 204 236 268 354 254 203 192 ...
##  $ fbs     : num  0 0 0 0 0 0 0 0 1 0 ...
##  $ restecg : num  2 2 0 2 0 2 0 2 2 0 ...
##  $ thalach : num  108 129 187 172 178 160 163 147 155 148 ...
##  $ exang   : num  1 1 0 0 0 0 1 0 1 0 ...
##  $ oldpeak : num  1.5 2.6 3.5 1.4 0.8 3.6 0.6 1.4 3.1 0.4 ...
##  $ slope   : num  2 2 3 1 1 3 1 2 3 2 ...
##  $ ca      : Factor w/ 5 levels "?","0.0","1.0",..: 5 4 2 2 2 4 2 3 2 2 ...
##  $ thal    : Factor w/ 4 levels "?","3.0","6.0",..: 2 4 2 2 2 2 2 4 4 3 ...
##  $ num     : int  2 1 0 0 0 3 0 2 1 0 ...
```

Attribute Information:

- age: age in years
- sex: sex (1 = male; 0 = female)
- cp: chest pain type

```
-- Value 1: typical angina
-- Value 2: atypical angina
-- Value 3: non-anginal pain
-- Value 4: asymptomatic
```

- trestbps: resting blood pressure (in mm Hg on admission to the hospital)
- chol: serum cholestoral in mg/dl
- fbs: (fasting blood sugar > 120 mg/dl) (1 = true; 0 = false)
- restecg: resting electrocardiographic results

```
-- Value 0: normal
-- Value 1: having ST-T wave abnormality (T wave inversions and/or ST
            elevation or depression of > 0.05 mV)
-- Value 2: showing probable or definite left ventricular hypertrophy
            by Estes' criteria
```

- thalach: maximum heart rate achieved
- exang: exercise induced angina (1 = yes; 0 = no)
- oldpeak = ST depression induced by exercise relative to rest
- slope: the slope of the peak exercise ST segment

```
-- Value 1: upsloping
-- Value 2: flat
-- Value 3: downsloping
```

- ca: number of major vessels (0-3) colored by flourosopy
- thal: 3 = normal; 6 = fixed defect; 7 = reversable defect
- num: diagnosis of heart disease (angiographic disease status)

```
-- Value 0: < 50% diameter narrowing
-- Value 1: > 50% diameter narrowing
```

Source Information:

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