

# Untitled

2025-03-12

## Read Excel

```
library(readxl)
```

```
## Warning: package 'readxl' was built under R version 4.4.3
```

```
library(knitr)  
library(FactoMineR)
```

```
## Warning: package 'FactoMineR' was built under R version 4.4.3
```

```
library(factoextra)
```

```
## Warning: package 'factoextra' was built under R version 4.4.3
```

```
## Cargando paquete requerido: ggplot2
```

```
## Welcome! Want to learn more? See two factoextra-related books at https://goo.gl/ve3WBa
```

```
library(corrplot)
```

```
## Warning: package 'corrplot' was built under R version 4.4.3
```

```
## corrplot 0.95 loaded
```

```
library(gridExtra)
```

```
## Warning: package 'gridExtra' was built under R version 4.4.3
```

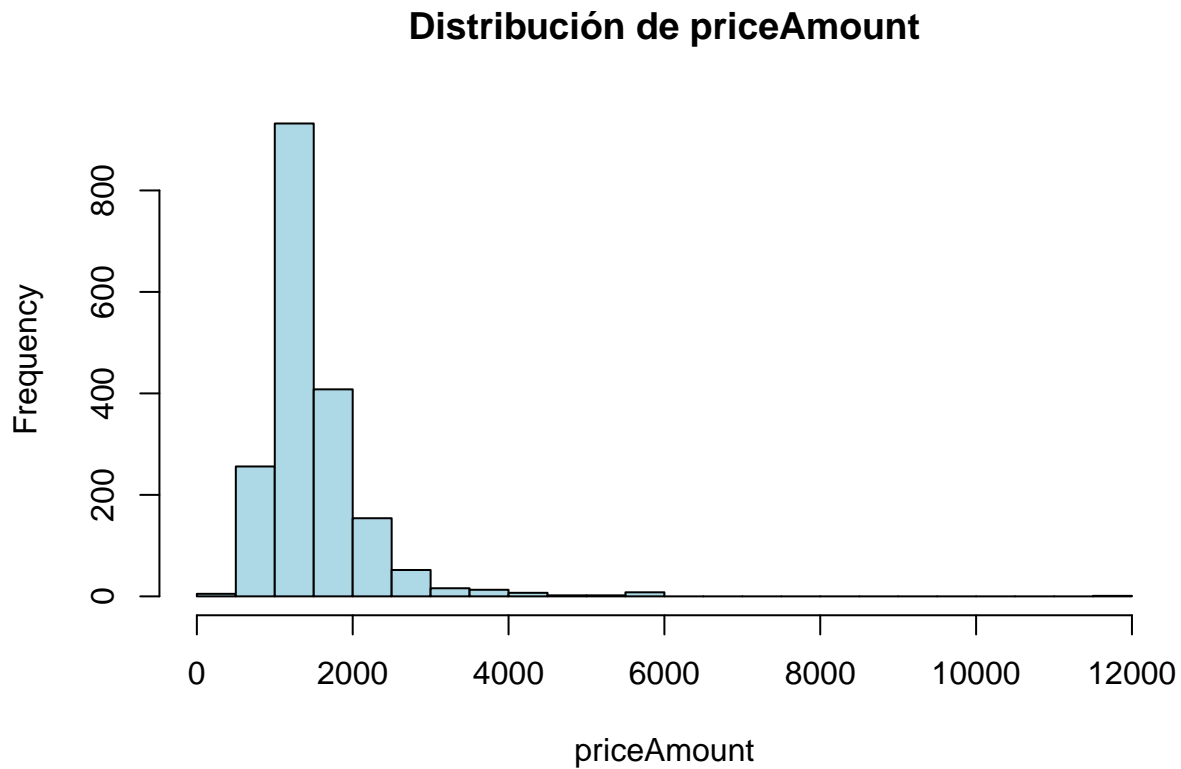
```
library(ggplot2)
```

```
data = read_excel("data_clean1.xlsx")
```

```
descFotocasa = data.frame("variable" = colnames(data),  
"tipo" = c ("text", "num", "num", rep("cat", 4), "date", rep("cat", 2), rep("num", 7),  
rep("bool", 4), rep("num", 12), "bool"))
```

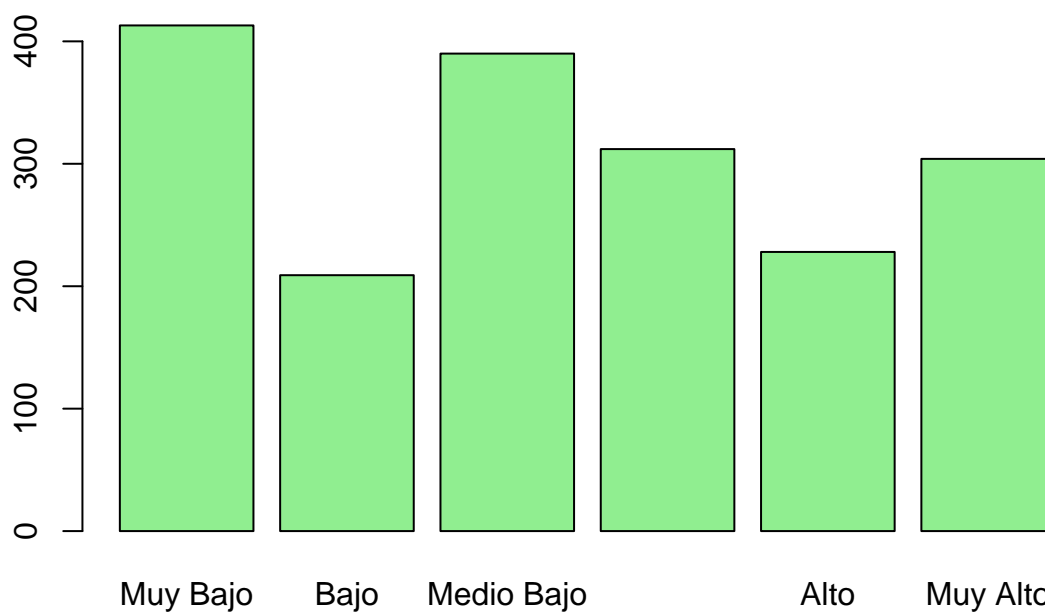
```
# AFC SIMPLE : neighborhood vs price
```

```
hist(data$priceAmount, breaks = 30, col = "lightblue", main = "Distribución de priceAmount", xlab = "pr
```



```
data$priceCategory <- cut(data$priceAmount,  
                           breaks = quantile(data$priceAmount, probs = seq(0, 1, length.out = 7), na.rm = TRUE),  
                           include.lowest = TRUE,  
                           labels = c("Muy Bajo", "Bajo", "Medio Bajo", "Medio Alto", "Alto", "Muy Alto"),  
                           na.rm = TRUE)  
barplot(table(data$priceCategory), col = "lightgreen", main = "Distribución de priceAmount por Categoría")
```

## Distribución de priceAmount por Categorías



```
quantile(data$priceAmount, probs = seq(0, 1, length.out = 7), na.rm = TRUE)
```

```
##      0% 16.66667% 33.33333%      50% 66.66667% 83.33333%      100%
##      320      1100      1200      1400      1600      1950      12000
```

```
contingency_table <- table(data$municipality, data$priceCategory)
```

```
contingency_table
```

```
##
##      Muy Bajo Bajo Medio Bajo Medio Alto Alto Muy Alto
##  Algirós      55  29      42      36  22      3
##  Benicalap     20   2       8       3   2      0
##  Benimaclet    26  10      20       6   2      1
##  Camins al Grau 38  22      30      26   9     12
##  Campanar       5   3       8       4   4     10
##  Ciutat Vella   21  19      50      61  57    106
##  El Pla del Real 19   8      27      16  13     21
##  Extramurs       9  17      37      27  28     26
##  Jesús         12  10       6       9   5      0
##  L'Eixample      7   7      16      27  40     75
##  L'Olivereta    17   6      15       2   0      2
##  La Saïdia     26  16      23       9   4      3
##  Patraix        2   9       8       8   0      1
```

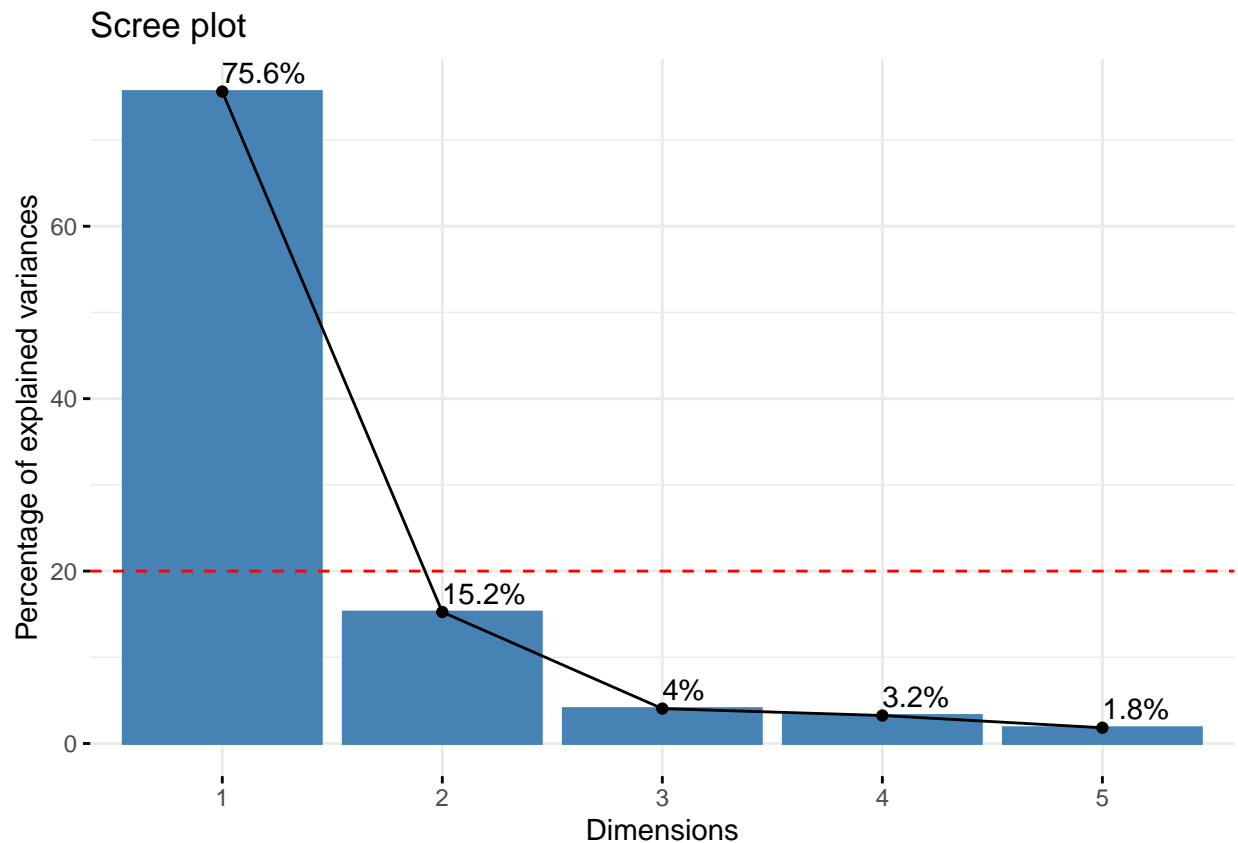
```
## Poblats Marítims      84  32      62      34  24      16
## Pobles de l'Oest      4   1       0       0   0       0
## Pobles del Nord       3   0       0       0   0       3
## Pobles del Sud       14   4       5       8   2      10
## Quatre Carreres      22  13      25      32  12      11
## Rascanya              29   1       8       4   4       4
```

```
chisq.test(contingency_table, simulate.p.value = TRUE)
```

```
##
## Pearson's Chi-squared test with simulated p-value (based on 2000
## replicates)
##
## data:  contingency_table
## X-squared = 589.78, df = NA, p-value = 0.0004998
```

*## La asociación entre el vecindario (neighborhood) y la categoría de precio (priceCategory) es estadísticamente significativa.*

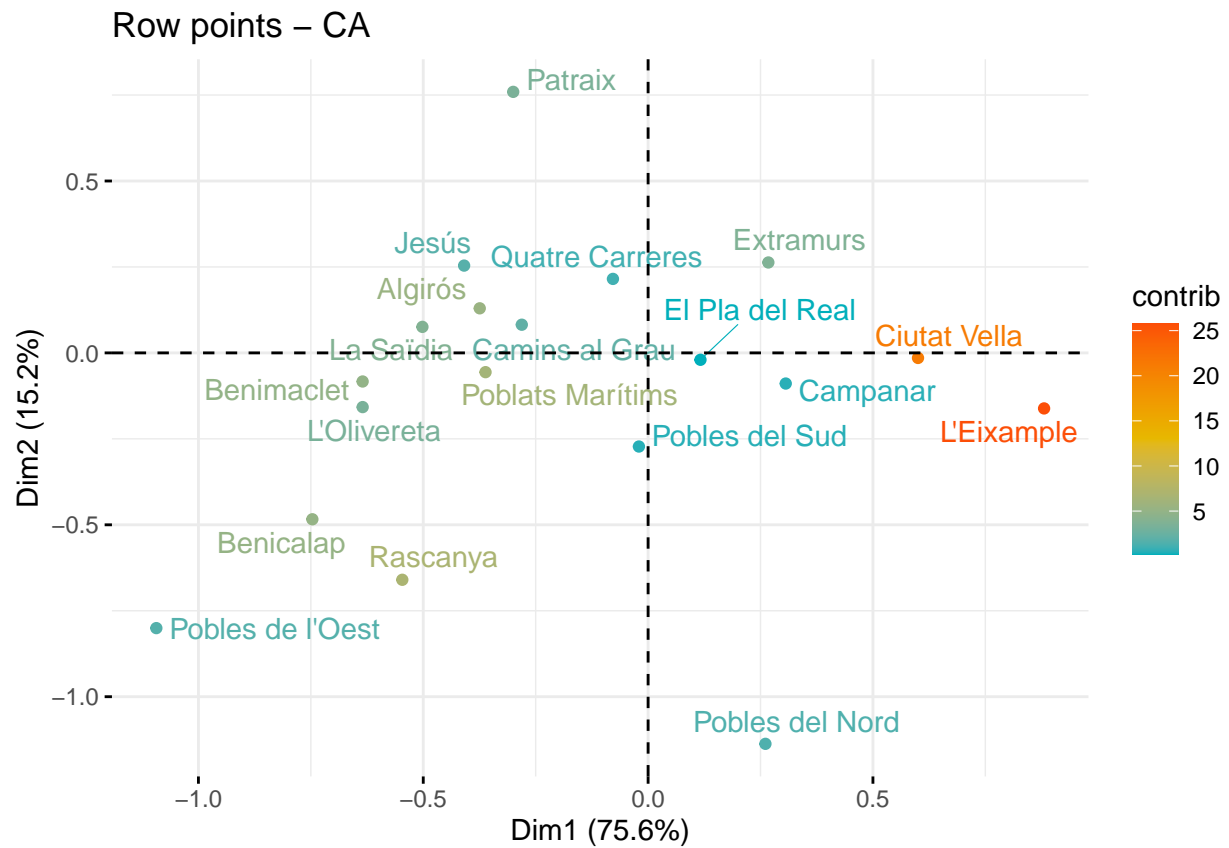
## Número de dimensiones y obtención del modelo



Note that the `echo = FALSE` parameter was added to the code chunk to prevent printing of the R code that generated the plot.

```
res.afc = CA(contingency_table, graph = FALSE, ncp=2)
```

```
fviz_ca_row(res.afc, axes = c(1,2), repel = TRUE, col.row = "contrib", gradient.cols = c("#00AFBB", "#E377C2"))
```



```
fviz_ca_col(res.afc, axes = c(1,2), repel = TRUE, col.col = "contrib", gradient.cols = c("#00AFBB", "#E377C2"))
```

