## Correlación

Irais Espejo

2022-07-04

# COEFICIENTE DE CORRELACIÓN

Para datos con distribucion normal

#### Area: Estadistica Paramétrica

Utilizamos la matriz "penguins.xlsx"

[25] "Adelie"

[31] "Adelie"

##

##

```
library(readxl)
penguins <- read_excel("penguins.xlsx")</pre>
```

### Coeficiente de correlación de Pearson

1. Seleccionamos las variables que vayamos a correlacionar.

"Adelie"

"Adelie"

```
str(penguins)
```

```
## tibble [344 x 9] (S3: tbl_df/tbl/data.frame)
                     : chr [1:344] "i1" "i2" "i3" "i4" ...
   $ ID
##
## $ especie
                     : chr [1:344] "Adelie" "Adelie" "Adelie" "Adelie" ...
                     : chr [1:344] "Torgersen" "Torgersen" "Torgersen" "Torgersen" ...
## $ isla
   $ largo_pico_mm : num [1:344] 39.1 39.5 40.3 37.8 36.7 39.3 38.9 39.2 34.1 42 ...
   $ grosor pico mm : num [1:344] 18.7 17.4 18 18.1 19.3 20.6 17.8 19.6 18.1 20.2 ...
   $ largo aleta mm : num [1:344] 181 186 195 190 193 190 181 195 193 190 ...
##
   $ masa corporal g: num [1:344] 3750 3800 3250 3700 3450 ...
                     : chr [1:344] "male" "female" "female" "female" ...
## $ genero
                     : num [1:344] 2007 2007 2007 2007 2007 ...
   $ año
penguins$especie
##
     [1] "Adelie"
                     "Adelie"
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                                                          "Adelie"
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##
     [7] "Adelie"
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##
    [13] "Adelie"
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    [19] "Adelie"
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"Adelie"

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[37] "Adelie"
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## [151] "Adelie"
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## [247] "Gentoo"
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## [253] "Gentoo"
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## [277] "Chinstrap" "Chinstrap"
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## [307] "Chinstrap" "Chinstrap" "Chinstrap" "Chinstrap" "Chinstrap"
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## [337] "Chinstrap" "Chinstrap" "Chinstrap" "Chinstrap" "Chinstrap"
## [343] "Chinstrap" "Chinstrap"
```

2. Se seleccionan las filas 1 a la 61 que corresponden a la especie Adeli y las variables cuantitativas.

#### adeli <- penguins [1:152,4:7]

- 3. Visualización de la matriz
- 3.1 Abrir la librería Knirt

## library(knitr)

3. Visualización en formato de tabla

#### kable(adeli)

39.1       18.7       181       3750         39.5       17.4       186       3800         40.3       18.0       195       3250         37.8       18.1       190       3700         36.7       19.3       193       3450         39.3       20.6       190       3650         38.9       17.8       181       3625         39.2       19.6       195       4675         34.1       18.1       193       3475         42.0       20.2       190       4250         37.8       17.1       186       3300         37.8       17.1       186       3300         38.6       21.2       191       3800         34.6       21.1       198       4400         36.6       17.8       185       3700         38.7       19.0       195       3450         42.5       20.7       197       4500         34.4       18.4       184       3325         46.0       21.5       194       4200         37.8       18.3       174       3400         37.7       18.7       180	largo_pico_mm	grosor_pico_mm	largo_aleta_mm	masa_corporal_g
39.5       17.4       186       3800         40.3       18.0       195       3250         37.8       18.1       190       3700         36.7       19.3       193       3450         39.3       20.6       190       3650         38.9       17.8       181       3625         39.2       19.6       195       4675         34.1       18.1       193       3475         42.0       20.2       190       4250         37.8       17.1       186       3300         37.8       17.1       186       3300         37.8       17.3       180       3700         41.1       17.6       182       3200         38.6       21.2       191       3800         34.6       21.1       198       4400         36.6       17.8       185       3700         38.7       19.0       195       3450         42.5       20.7       197       4500         34.4       18.4       184       3325         46.0       21.5       194       4200         37.8       18.3       174				
40.3       18.0       195       3250         37.8       18.1       190       3700         36.7       19.3       193       3450         39.3       20.6       190       3650         38.9       17.8       181       3625         39.2       19.6       195       4675         34.1       18.1       193       3475         42.0       20.2       190       4250         37.8       17.1       186       3300         37.8       17.1       186       3300         37.8       17.3       180       3700         41.1       17.6       182       3200         38.6       21.2       191       3800         34.6       21.1       198       4400         36.6       17.8       185       3700         38.7       19.0       195       3450         42.5       20.7       197       4500         34.4       18.4       184       3325         46.0       21.5       194       4200         37.8       18.3       174       3400         37.7       18.7       180				
37.8       18.1       190       3700         36.7       19.3       193       3450         39.3       20.6       190       3650         38.9       17.8       181       3625         39.2       19.6       195       4675         34.1       18.1       193       3475         42.0       20.2       190       4250         37.8       17.1       186       3300         37.8       17.3       180       3700         41.1       17.6       182       3200         38.6       21.2       191       3800         34.6       21.1       198       4400         36.6       17.8       185       3700         38.7       19.0       195       3450         42.5       20.7       197       4500         34.4       18.4       184       3325         46.0       21.5       194       4200         37.8       18.3       174       3400         37.7       18.7       180       3600		17.4	186	3800
36.7       19.3       193       3450         39.3       20.6       190       3650         38.9       17.8       181       3625         39.2       19.6       195       4675         34.1       18.1       193       3475         42.0       20.2       190       4250         37.8       17.1       186       3300         37.8       17.3       180       3700         41.1       17.6       182       3200         38.6       21.2       191       3800         34.6       21.1       198       4400         36.6       17.8       185       3700         38.7       19.0       195       3450         42.5       20.7       197       4500         34.4       18.4       184       3325         46.0       21.5       194       4200         37.8       18.3       174       3400         37.7       18.7       180       3600	40.3	18.0	195	3250
39.3       20.6       190       3650         38.9       17.8       181       3625         39.2       19.6       195       4675         34.1       18.1       193       3475         42.0       20.2       190       4250         37.8       17.1       186       3300         37.8       17.3       180       3700         41.1       17.6       182       3200         38.6       21.2       191       3800         34.6       21.1       198       4400         36.6       17.8       185       3700         38.7       19.0       195       3450         42.5       20.7       197       4500         34.4       18.4       184       3325         46.0       21.5       194       4200         37.8       18.3       174       3400         37.7       18.7       180       3600	37.8	18.1	190	3700
38.9       17.8       181       3625         39.2       19.6       195       4675         34.1       18.1       193       3475         42.0       20.2       190       4250         37.8       17.1       186       3300         37.8       17.3       180       3700         41.1       17.6       182       3200         38.6       21.2       191       3800         34.6       21.1       198       4400         36.6       17.8       185       3700         38.7       19.0       195       3450         42.5       20.7       197       4500         34.4       18.4       184       3325         46.0       21.5       194       4200         37.8       18.3       174       3400         37.7       18.7       180       3600	36.7	19.3	193	3450
39.2       19.6       195       4675         34.1       18.1       193       3475         42.0       20.2       190       4250         37.8       17.1       186       3300         37.8       17.3       180       3700         41.1       17.6       182       3200         38.6       21.2       191       3800         34.6       21.1       198       4400         36.6       17.8       185       3700         38.7       19.0       195       3450         42.5       20.7       197       4500         34.4       18.4       184       3325         46.0       21.5       194       4200         37.8       18.3       174       3400         37.7       18.7       180       3600	39.3	20.6	190	3650
34.1       18.1       193       3475         42.0       20.2       190       4250         37.8       17.1       186       3300         37.8       17.3       180       3700         41.1       17.6       182       3200         38.6       21.2       191       3800         34.6       21.1       198       4400         36.6       17.8       185       3700         38.7       19.0       195       3450         42.5       20.7       197       4500         34.4       18.4       184       3325         46.0       21.5       194       4200         37.8       18.3       174       3400         37.7       18.7       180       3600	38.9	17.8	181	3625
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	39.2	19.6	195	4675
37.8       17.1       186       3300         37.8       17.3       180       3700         41.1       17.6       182       3200         38.6       21.2       191       3800         34.6       21.1       198       4400         36.6       17.8       185       3700         38.7       19.0       195       3450         42.5       20.7       197       4500         34.4       18.4       184       3325         46.0       21.5       194       4200         37.8       18.3       174       3400         37.7       18.7       180       3600	34.1	18.1	193	3475
37.8       17.3       180       3700         41.1       17.6       182       3200         38.6       21.2       191       3800         34.6       21.1       198       4400         36.6       17.8       185       3700         38.7       19.0       195       3450         42.5       20.7       197       4500         34.4       18.4       184       3325         46.0       21.5       194       4200         37.8       18.3       174       3400         37.7       18.7       180       3600	42.0	20.2	190	4250
41.1       17.6       182       3200         38.6       21.2       191       3800         34.6       21.1       198       4400         36.6       17.8       185       3700         38.7       19.0       195       3450         42.5       20.7       197       4500         34.4       18.4       184       3325         46.0       21.5       194       4200         37.8       18.3       174       3400         37.7       18.7       180       3600	37.8	17.1	186	3300
38.6       21.2       191       3800         34.6       21.1       198       4400         36.6       17.8       185       3700         38.7       19.0       195       3450         42.5       20.7       197       4500         34.4       18.4       184       3325         46.0       21.5       194       4200         37.8       18.3       174       3400         37.7       18.7       180       3600	37.8	17.3	180	3700
34.6       21.1       198       4400         36.6       17.8       185       3700         38.7       19.0       195       3450         42.5       20.7       197       4500         34.4       18.4       184       3325         46.0       21.5       194       4200         37.8       18.3       174       3400         37.7       18.7       180       3600	41.1	17.6	182	3200
36.6       17.8       185       3700         38.7       19.0       195       3450         42.5       20.7       197       4500         34.4       18.4       184       3325         46.0       21.5       194       4200         37.8       18.3       174       3400         37.7       18.7       180       3600	38.6	21.2	191	3800
38.7       19.0       195       3450         42.5       20.7       197       4500         34.4       18.4       184       3325         46.0       21.5       194       4200         37.8       18.3       174       3400         37.7       18.7       180       3600	34.6	21.1	198	4400
42.5       20.7       197       4500         34.4       18.4       184       3325         46.0       21.5       194       4200         37.8       18.3       174       3400         37.7       18.7       180       3600	36.6	17.8	185	3700
34.4       18.4       184       3325         46.0       21.5       194       4200         37.8       18.3       174       3400         37.7       18.7       180       3600	38.7	19.0	195	3450
46.0       21.5       194       4200         37.8       18.3       174       3400         37.7       18.7       180       3600	42.5	20.7	197	4500
37.8 18.3 174 3400 37.7 18.7 180 3600	34.4	18.4	184	3325
37.8 18.3 174 3400 37.7 18.7 180 3600				4200
37.7 18.7 180 3600				3400
35.9   19.2   189   3800	35.9	19.2	189	3800

38.2 38.8	18.1 17.2	185	2050
38.8	17.2		3950
		180	3800
35.3	18.9	187	3800
40.6	18.6	183	3550
40.5	17.9	187	3200
37.9	18.6	172	3150
40.5	18.9	180	3950
39.5	16.7	178	3250
37.2	18.1	178	3900
39.5	17.8	188	3300
40.9	18.9	184	3900
36.4	17.0	195	3325
39.2	21.1	196	4150
38.8	20.0	190	3950
42.2	18.5	180	3550
37.6	19.3	181	3300
39.8	19.1	184	4650
36.5	18.0	182	3150
40.8	18.4	195	3900
36.0	18.5	186	3100
44.1	19.7	196	4400
37.0	16.9	185	3000
39.6	18.8	190	4600
41.1	19.0	182	3425
37.5	18.9	179	2975
36.0	17.9	190	3450
42.3	21.2	191	4150
39.6	17.7	186	3500
40.1	18.9	188	4300
35.0	17.9	190	3450
42.0	19.5	200	4050
34.5	18.1	187	2900
41.4	18.6	191	3700
39.0	17.5	186	3550
40.6	18.8	193	3800
36.5	16.6	181	2850
37.6	19.1	194	3750
35.7	16.9	185	3150
41.3	21.1	195	4400
37.6	17.0	185	3600
41.1	18.2	192	4050
36.4	17.1	184	2850
41.6	18.0	192	3950

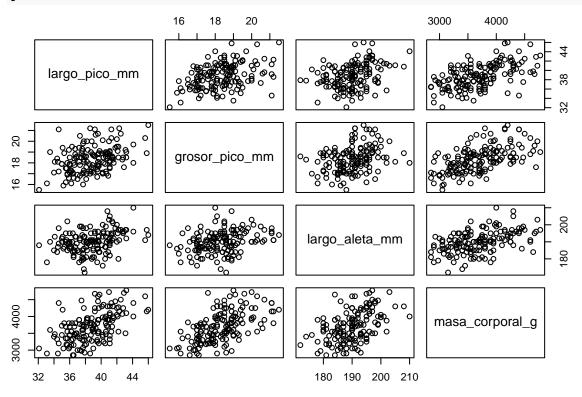
$\frac{\text{largo}_{-}}{}$	_picomm	grosor_	_picomm	largo_aleta_mm	masa_corporal_g
	35.5		16.2	195	3350
	41.1		19.1	188	4100
	35.9		16.6	190	3050
	41.8		19.4	198	4450
	33.5		19.0	190	3600
	39.7		18.4	190	3900
	39.6		17.2	196	3550
	45.8		18.9	197	4150
	35.5		17.5	190	3700
	42.8		18.5	195	4250
	40.9		16.8	191	3700
	37.2		19.4	184	3900
	36.2		16.1	187	3550
	42.1		19.1	195	4000
	34.6		17.2	189	3200
	42.9		17.6	196	4700
	36.7		18.8	187	3800
	35.1		19.4	193	4200
	37.3		17.8	191	3350
	41.3		20.3	194	3550
	36.3		19.5	190	3800
	36.9		18.6	189	3500
	38.3		19.2	189	3950
	38.9		18.8	190	3600
	35.7		18.0	202	3550
	41.1		18.1	205	4300
	34.0		17.1	185	3400
	39.6		18.1	186	4450
	36.2		17.3	187	3300
	40.8		18.9	208	4300
	38.1		18.6	190	3700
	40.3		18.5	196	4350
	33.1		16.1	178	2900
	43.2		18.5	192	4100
	35.0		17.9	192	3725
	41.0		20.0	203	4725
	37.7		16.0	183	3075
	37.8		20.0	190	4250
	37.9		18.6	193	2925
	39.7		18.9	184	3550
	38.6		17.2	199	3750
	38.2		20.0	190	3900
	38.1		17.0	181	3175

43.2         19.0         197         4775           38.1         16.5         198         3825           45.6         20.3         191         4600           39.7         17.7         193         3200           42.2         19.5         197         4275           39.6         20.7         191         3900           42.7         18.3         196         4075           38.6         17.0         188         2900           37.3         20.5         199         3775           35.7         17.0         189         3350           41.1         18.6         189         3325           36.2         17.2         187         3150           37.7         19.8         198         3500           40.2         17.0         176         3450           41.4         18.5         202         3875           35.2         15.9         186         3050           40.6         19.0         199         4000           38.8         17.6         191         3275           41.5         18.3         195         4300           39.0	largo_pico_mm	grosor_pico_mm	largo_aleta_mm	masa_corporal_g
45.6       20.3       191       4600         39.7       17.7       193       3200         42.2       19.5       197       4275         39.6       20.7       191       3900         42.7       18.3       196       4075         38.6       17.0       188       2900         37.3       20.5       199       3775         35.7       17.0       189       3350         41.1       18.6       189       3325         36.2       17.2       187       3150         37.7       19.8       198       3500         40.2       17.0       176       3450         41.4       18.5       202       3875         35.2       15.9       186       3050         40.6       19.0       199       4000         38.8       17.6       191       3275         41.5       18.3       195       4300         39.0       17.1       191       3050         44.1       18.0       210       4000         38.5       17.9       190       3325         43.1       19.2       197	43.2	19.0	197	4775
39.7       17.7       193       3200         42.2       19.5       197       4275         39.6       20.7       191       3900         42.7       18.3       196       4075         38.6       17.0       188       2900         37.3       20.5       199       3775         35.7       17.0       189       3350         41.1       18.6       189       3325         36.2       17.2       187       3150         37.7       19.8       198       3500         40.2       17.0       176       3450         41.4       18.5       202       3875         35.2       15.9       186       3050         40.6       19.0       199       4000         38.8       17.6       191       3275         41.5       18.3       195       4300         39.0       17.1       191       3050         44.1       18.0       210       4000         38.5       17.9       190       3325         43.1       19.2       197       3500         36.8       18.5       193	38.1	16.5	198	3825
42.2       19.5       197       4275         39.6       20.7       191       3900         42.7       18.3       196       4075         38.6       17.0       188       2900         37.3       20.5       199       3775         35.7       17.0       189       3350         41.1       18.6       189       3325         36.2       17.2       187       3150         37.7       19.8       198       3500         40.2       17.0       176       3450         41.4       18.5       202       3875         35.2       15.9       186       3050         40.6       19.0       199       4000         38.8       17.6       191       3275         41.5       18.3       195       4300         39.0       17.1       191       3050         44.1       18.0       210       4000         38.5       17.9       190       3325         43.1       19.2       197       3500         36.8       18.5       193       3500         37.5       18.5       199	45.6	20.3	191	4600
39.6       20.7       191       3900         42.7       18.3       196       4075         38.6       17.0       188       2900         37.3       20.5       199       3775         35.7       17.0       189       3350         41.1       18.6       189       3325         36.2       17.2       187       3150         37.7       19.8       198       3500         40.2       17.0       176       3450         41.4       18.5       202       3875         35.2       15.9       186       3050         40.6       19.0       199       4000         38.8       17.6       191       3275         41.5       18.3       195       4300         39.0       17.1       191       3050         44.1       18.0       210       4000         38.5       17.9       190       3325         43.1       19.2       197       3500         36.8       18.5       193       3500         37.5       18.5       199       4475         38.1       17.6       187	39.7	17.7	193	3200
42.7       18.3       196       4075         38.6       17.0       188       2900         37.3       20.5       199       3775         35.7       17.0       189       3350         41.1       18.6       189       3325         36.2       17.2       187       3150         37.7       19.8       198       3500         40.2       17.0       176       3450         41.4       18.5       202       3875         35.2       15.9       186       3050         40.6       19.0       199       4000         38.8       17.6       191       3275         41.5       18.3       195       4300         39.0       17.1       191       3050         44.1       18.0       210       4000         38.5       17.9       190       3325         43.1       19.2       197       3500         36.8       18.5       193       3500         37.5       18.5       199       4475         38.1       17.6       187       3425         41.1       17.5       190	42.2	19.5	197	4275
38.6         17.0         188         2900           37.3         20.5         199         3775           35.7         17.0         189         3350           41.1         18.6         189         3325           36.2         17.2         187         3150           37.7         19.8         198         3500           40.2         17.0         176         3450           41.4         18.5         202         3875           35.2         15.9         186         3050           40.6         19.0         199         4000           38.8         17.6         191         3275           41.5         18.3         195         4300           39.0         17.1         191         3050           44.1         18.0         210         4000           38.5         17.9         190         3325           43.1         19.2         197         3500           36.8         18.5         193         3500           37.5         18.5         199         4475           38.1         17.6         187         3425           41.1	39.6	20.7	191	3900
37.3       20.5       199       3775         35.7       17.0       189       3350         41.1       18.6       189       3325         36.2       17.2       187       3150         37.7       19.8       198       3500         40.2       17.0       176       3450         41.4       18.5       202       3875         35.2       15.9       186       3050         40.6       19.0       199       4000         38.8       17.6       191       3275         41.5       18.3       195       4300         39.0       17.1       191       3050         44.1       18.0       210       4000         38.5       17.9       190       3325         43.1       19.2       197       3500         36.8       18.5       193       3500         37.5       18.5       199       4475         38.1       17.6       187       3425         41.1       17.5       190       3900         35.6       17.5       191       3175         40.2       20.1       200	42.7	18.3	196	4075
35.7       17.0       189       3350         41.1       18.6       189       3325         36.2       17.2       187       3150         37.7       19.8       198       3500         40.2       17.0       176       3450         41.4       18.5       202       3875         35.2       15.9       186       3050         40.6       19.0       199       4000         38.8       17.6       191       3275         41.5       18.3       195       4300         39.0       17.1       191       3050         44.1       18.0       210       4000         38.5       17.9       190       3325         43.1       19.2       197       3500         36.8       18.5       193       3500         37.5       18.5       199       4475         38.1       17.6       187       3425         41.1       17.5       190       3900         35.6       17.5       191       3175         40.2       20.1       200       3975         37.0       16.5       185	38.6	17.0	188	2900
41.1       18.6       189       3325         36.2       17.2       187       3150         37.7       19.8       198       3500         40.2       17.0       176       3450         41.4       18.5       202       3875         35.2       15.9       186       3050         40.6       19.0       199       4000         38.8       17.6       191       3275         41.5       18.3       195       4300         39.0       17.1       191       3050         44.1       18.0       210       4000         38.5       17.9       190       3325         43.1       19.2       197       3500         36.8       18.5       193       3500         37.5       18.5       199       4475         38.1       17.6       187       3425         41.1       17.5       190       390         35.6       17.5       191       3175         40.2       20.1       200       3975         37.0       16.5       185       3400         39.7       17.9       193       <	37.3	20.5	199	3775
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	35.7	17.0	189	3350
37.7       19.8       198       3500         40.2       17.0       176       3450         41.4       18.5       202       3875         35.2       15.9       186       3050         40.6       19.0       199       4000         38.8       17.6       191       3275         41.5       18.3       195       4300         39.0       17.1       191       3050         44.1       18.0       210       4000         38.5       17.9       190       3325         43.1       19.2       197       3500         36.8       18.5       193       3500         37.5       18.5       199       4475         38.1       17.6       187       3425         41.1       17.5       190       3900         35.6       17.5       191       3175         40.2       20.1       200       3975         37.0       16.5       185       3400         39.7       17.9       193       4250         40.2       17.1       193       3400         40.2       17.1       193	41.1	18.6	189	3325
40.2       17.0       176       3450         41.4       18.5       202       3875         35.2       15.9       186       3050         40.6       19.0       199       4000         38.8       17.6       191       3275         41.5       18.3       195       4300         39.0       17.1       191       3050         44.1       18.0       210       4000         38.5       17.9       190       3325         43.1       19.2       197       3500         36.8       18.5       193       3500         37.5       18.5       199       4475         38.1       17.6       187       3425         41.1       17.5       190       3900         35.6       17.5       191       3175         40.2       20.1       200       3975         37.0       16.5       185       3400         39.7       17.9       193       4250         40.2       17.1       193       3400         40.6       17.2       187       3475         32.1       15.5       188	36.2	17.2	187	3150
41.4       18.5       202       3875         35.2       15.9       186       3050         40.6       19.0       199       4000         38.8       17.6       191       3275         41.5       18.3       195       4300         39.0       17.1       191       3050         44.1       18.0       210       4000         38.5       17.9       190       3325         43.1       19.2       197       3500         36.8       18.5       193       3500         37.5       18.5       199       4475         38.1       17.6       187       3425         41.1       17.5       190       3900         35.6       17.5       191       3175         40.2       20.1       200       3975         37.0       16.5       185       3400         39.7       17.9       193       4250         40.2       17.1       193       3400         40.6       17.2       187       3475         32.1       15.5       188       3050         40.7       17.0       190	37.7	19.8	198	3500
35.2       15.9       186       3050         40.6       19.0       199       4000         38.8       17.6       191       3275         41.5       18.3       195       4300         39.0       17.1       191       3050         44.1       18.0       210       4000         38.5       17.9       190       3325         43.1       19.2       197       3500         36.8       18.5       193       3500         37.5       18.5       199       4475         38.1       17.6       187       3425         41.1       17.5       190       3900         35.6       17.5       191       3175         40.2       20.1       200       3975         37.0       16.5       185       3400         39.7       17.9       193       4250         40.2       17.1       193       3400         40.6       17.2       187       3475         32.1       15.5       188       3050         40.7       17.0       190       3725         37.3       16.8       192	40.2	17.0	176	3450
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	41.4	18.5	202	3875
38.8       17.6       191       3275         41.5       18.3       195       4300         39.0       17.1       191       3050         44.1       18.0       210       4000         38.5       17.9       190       3325         43.1       19.2       197       3500         36.8       18.5       193       3500         37.5       18.5       199       4475         38.1       17.6       187       3425         41.1       17.5       190       3900         35.6       17.5       191       3175         40.2       20.1       200       3975         37.0       16.5       185       3400         39.7       17.9       193       4250         40.2       17.1       193       3400         40.6       17.2       187       3475         32.1       15.5       188       3050         40.7       17.0       190       3725         37.3       16.8       192       3000         39.0       18.7       185       3650         39.2       18.6       190	35.2	15.9	186	3050
41.5       18.3       195       4300         39.0       17.1       191       3050         44.1       18.0       210       4000         38.5       17.9       190       3325         43.1       19.2       197       3500         36.8       18.5       193       3500         37.5       18.5       199       4475         38.1       17.6       187       3425         41.1       17.5       190       3900         35.6       17.5       191       3175         40.2       20.1       200       3975         37.0       16.5       185       3400         39.7       17.9       193       4250         40.2       17.1       193       3400         40.6       17.2       187       3475         32.1       15.5       188       3050         40.7       17.0       190       3725         37.3       16.8       192       3000         39.0       18.7       185       3650         39.2       18.6       190       4250         36.6       18.4       184	40.6	19.0	199	4000
39.0       17.1       191       3050         44.1       18.0       210       4000         38.5       17.9       190       3325         43.1       19.2       197       3500         36.8       18.5       193       3500         37.5       18.5       199       4475         38.1       17.6       187       3425         41.1       17.5       190       3900         35.6       17.5       191       3175         40.2       20.1       200       3975         37.0       16.5       185       3400         39.7       17.9       193       4250         40.2       17.1       193       3400         40.6       17.2       187       3475         32.1       15.5       188       3050         40.7       17.0       190       3725         37.3       16.8       192       3000         39.0       18.7       185       3650         39.2       18.6       190       4250         36.6       18.4       184       3475         36.6       17.8       195	38.8	17.6	191	3275
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	41.5	18.3	195	4300
38.5       17.9       190       3325         43.1       19.2       197       3500         36.8       18.5       193       3500         37.5       18.5       199       4475         38.1       17.6       187       3425         41.1       17.5       190       3900         35.6       17.5       191       3175         40.2       20.1       200       3975         37.0       16.5       185       3400         39.7       17.9       193       4250         40.2       17.1       193       3400         40.6       17.2       187       3475         32.1       15.5       188       3050         40.7       17.0       190       3725         37.3       16.8       192       3000         39.0       18.7       185       3650         39.2       18.6       190       4250         36.6       18.4       184       3475         36.0       17.8       195       3450         37.8       18.1       193       3750	39.0	17.1	191	3050
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	44.1	18.0	210	4000
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	38.5	17.9	190	3325
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	43.1	19.2	197	3500
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	36.8	18.5	193	3500
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	37.5	18.5	199	4475
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	38.1	17.6	187	3425
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		17.5	190	3900
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	35.6	17.5		3175
39.7       17.9       193       4250         40.2       17.1       193       3400         40.6       17.2       187       3475         32.1       15.5       188       3050         40.7       17.0       190       3725         37.3       16.8       192       3000         39.0       18.7       185       3650         39.2       18.6       190       4250         36.6       18.4       184       3475         36.0       17.8       195       3450         37.8       18.1       193       3750	40.2	20.1	200	3975
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	37.0	16.5	185	3400
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		17.9		4250
32.1       15.5       188       3050         40.7       17.0       190       3725         37.3       16.8       192       3000         39.0       18.7       185       3650         39.2       18.6       190       4250         36.6       18.4       184       3475         36.0       17.8       195       3450         37.8       18.1       193       3750	40.2	17.1	193	3400
40.7       17.0       190       3725         37.3       16.8       192       3000         39.0       18.7       185       3650         39.2       18.6       190       4250         36.6       18.4       184       3475         36.0       17.8       195       3450         37.8       18.1       193       3750	40.6	17.2	187	
37.3       16.8       192       3000         39.0       18.7       185       3650         39.2       18.6       190       4250         36.6       18.4       184       3475         36.0       17.8       195       3450         37.8       18.1       193       3750	32.1	15.5	188	3050
39.0       18.7       185       3650         39.2       18.6       190       4250         36.6       18.4       184       3475         36.0       17.8       195       3450         37.8       18.1       193       3750		17.0		
39.2       18.6       190       4250         36.6       18.4       184       3475         36.0       17.8       195       3450         37.8       18.1       193       3750				
36.6       18.4       184       3475         36.0       17.8       195       3450         37.8       18.1       193       3750				
36.0       17.8       195       3450         37.8       18.1       193       3750				
37.8 18.1 193 3750				
36.0 17.1 187 3700				
	36.0	17.1	187	3700

largo_pico_mm	grosor_pico_mm	largo_aleta_mm	$masa\_corporal\_g$
41.5	18.5	201	4000

4. Generación del grafico de correlación

## plot(adeli)



5. Cálculo de la correlación de pearson

#### cor(adeli)

```
##
                   largo_pico_mm grosor_pico_mm largo_aleta_mm masa_corporal_g
                       1.0000000
                                       0.3917580
                                                       0.3256178
                                                                       0.5486177
## largo_pico_mm
## grosor pico mm
                       0.3917580
                                       1.0000000
                                                       0.3075689
                                                                       0.5760619
## largo_aleta_mm
                       0.3256178
                                       0.3075689
                                                       1.0000000
                                                                       0.4682015
## masa_corporal_g
                       0.5486177
                                       0.5760619
                                                       0.4682015
                                                                        1.0000000
```

- 6. Organización visual de la tabla de correlaciones
- 6.1. Se genera un nuevo objeto con el nombre de pearson

## pearson<-cor(adeli)</pre>

6.2. Se abre la librería knitr

#### library(knitr)

6.3. Se utiliza la funcion kable

# kable(pearson)

	largo_pico_mm	grosor_pico_mm	$largo\_aleta\_mm$	$masa\_corporal\_g$
largo_pico_mm	1.0000000	0.3917580	0.3256178	0.5486177
grosor_pico_mm	0.3917580	1.0000000	0.3075689	0.5760619
$largo\_aleta\_mm$	0.3256178	0.3075689	1.0000000	0.4682015
$masa\_corporal\_g$	0.5486177	0.5760619	0.4682015	1.0000000