Laboratorio_6.R

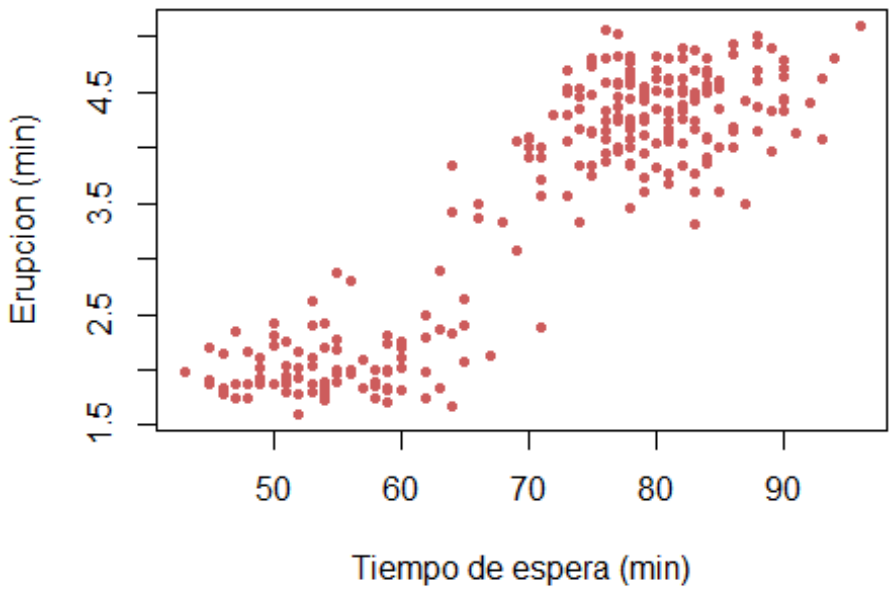
Juan Carlos Delgado Garza

2025-11-27

```
# ==========================================
# Correlacion de Pearson
# Datos del geyser Old Faithful
# 24/09/2025
# ==========================================

data ("faithful")

plot(faithful$waiting, faithful$eruptions,
     xlab = "Tiempo de espera (min)",
     ylab = "Erupcion (min)",
     col = "indianred",
     pch = 20)
```




```
#Correlacionar las dos variables

shapiro.test(faithful$eruptions)

##
##  Shapiro-Wilk normality test
```

```
##
## data:  faithful$eruptions
## W = 0.84592, p-value = 9.036e-16
```

```
shapiro.test(faithful$waiting)
```

```
##
##  Shapiro-Wilk normality test
##
## data:  faithful$waiting
## W = 0.92215, p-value = 1.015e-10
```

```
# ======================================================
# Pearson solo se utiliza cuando tenemos datos normales
# ======================================================
```

```
cor.test(faithful$waiting, faithful$eruptions,
         method = "pearson")
```

```
##
##  Pearson's product-moment correlation
##
## data:  faithful$waiting and faithful$eruptions
## t = 34.089, df = 270, p-value < 2.2e-16
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
##  0.8756964 0.9210652
## sample estimates:
##       cor
## 0.9008112
```

```
# ============================================================
# Spearman se utiliza como contyraparte para datos no normales
# ============================================================
```

```
cor.test(faithful$waiting, faithful$eruptions,
         method = "spearman")
```

```
## Warning in cor.test.default(faithful$waiting, faithful$eruptions,
method =
## "spearman"): Cannot compute exact p-value with ties
```

```
##
##  Spearman's rank correlation rho
##
## data:  faithful$waiting and faithful$eruptions
## S = 744659, p-value < 2.2e-16
## alternative hypothesis: true rho is not equal to 0
## sample estimates:
##       rho
## 0.7779721
```