Grafico en 3D

remotes::install\_version("htmltools", version = "0.5.7", upgrade = "never")

remotes::install\_version("htmlwidgets", version = "1.5.4", upgrade = "never")

library(htmltools)

library(htmlwidgets)

library(plotly)

# Filtramos algunos modelos para mejorar la visualización

modelos\_filtrados <- c("A3", "A4", "Q3", "TT", "A6", "Q5", "A1", "A5")

# Filtramos datos desde el año 2005

datos\_scatter3d <- datos\_audi[datos\_audi$model %in% modelos\_filtrados & datos\_audi$year >= 2008, c("model", "year", "price", "mileage")]

# Función para agregar ruido a los datos

agregar\_ruido <- function(x, factor = 0.02) {

return(x + factor \* runif(length(x), min = -1, max = 1))

}

# Aplicamos la función para agregar ruido a las coordenadas

datos\_scatter3d$year <- agregar\_ruido(datos\_scatter3d$year)

datos\_scatter3d$price <- agregar\_ruido(datos\_scatter3d$price)

datos\_scatter3d$mileage <- agregar\_ruido(datos\_scatter3d$mileage)

# Creamos el gráfico interactivo

grafico\_scatter3d <- plot\_ly(

data = datos\_scatter3d,

x = ~year,

y = ~price,

z = ~mileage,

type = "scatter3d",

mode = "markers",

color = ~model,

marker = list(size = 5, opacity = 0.8)

) %>%

layout(

scene = list(

xaxis = list(title = "Año"),

yaxis = list(title = "Precio"),

zaxis = list(title = "Kilometraje", range = c(0, 150000))

),

margin = list(l = 0, r = 0, b = 0, t = 0),

legend = list(orientation = "h", x = 0.5, y = -0.1)

)

# Guardamos el gráfico interactivo en un archivo HTML

htmlwidgets::saveWidget(grafico\_scatter3d, file = "scatter3d\_audi\_mejorado.html")