New Cars in America (1993)

Background

Specifications are given for 93 new vehicles in America for the 1993 year. The 1990's were a very profitable decade of car making and sales. Rising affluence produced a demand for 'bigger and better' - sporty rides, larger cars and a trend towards purchasing vans and SUV's.

Data

The variables recorded include three different prices (from a *basic* model with no extras to *premium* model that included all the extra options), measurements relating to the engine, dimensions of the vehicle, and fuel efficiency. The dataset contains some missing data (shown by an asterisk *). Updates for this may be found from the site http://www.autofiles.org/ to allow filling in of some of the missing values.

source: A random sample of models taken from

The 1993 Cars - Annual Auto Issue from Consumer Reports

PACE New Car & Truck 1993 Buying Guide

Variables

Vehicle Name
Car Type = (1=Small, 2=Midsize, 3=Large, 4=Compact, 5=Sporty, 6=Van)
Min Price = Price for *basic* model in U.S. 1000 Dollars
Mid Price = Average of Min and Max prices in U.S. 1000 Dollars
Max Price = Price for *premium* model in U.S. 1000 Dollars
City = fuel efficiency in litres per 100km in cities and on motorways
Open Road = fuel efficiency in litres per 100km on country/open road
Airbags = (0 = none, 1 = driver only, 2 = driver & passenger)
Car Train Type = (0=Front Wheel Drive, 1=Rear Wheel Drive, 2=All Wheel Drive)
Number of Cylinders = 4 6 or 8
Engine Size = size in litres
Horsepower = power of car measured in hp
Weight = weight of car in kg
Revs at Max Power = engine revs at maximum horsepower in RPM
Revs at Cruising Speed = engine revs while cruising in top gear in RPM
Manual Transmission = (0=No, 1=Yes)
Fuel Tank = capacity of fuel tank in litres
Passenger Capacity = seating capacity of vehicle
Length = Length of car in cm
Wheel Base = length of wheel base in cm

Width = width of car in cm
U-turn space = room needed to make a full U-turn in metres
Rear seat room = in cm
Luggage capacity = in cubic metres
Weight = weight of car in kg
USA or Foreign = country of manufacture (0=Foreign, 1=American)

* indicates missing data

Questions

There are many variables in this dataset to explore

Explore relationships between different variables and compare the scatterplots produced

Looking at your scatterplots, what are some of the main differences we can see between USA vehicles and foreign vehicles?

Explore the different outliers that appear in the scatterplots, looking for any explanations for these

State an explanatory variable and a response variable, can you make any predictions for cars not listed? (For example what might be the fuel efficiency of a 300hp car?)