

lecture
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lecture
11.2

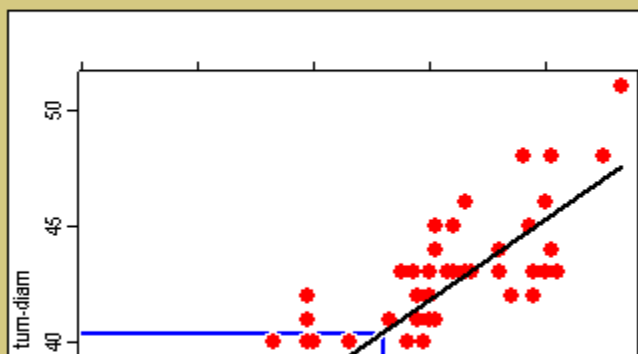
explained
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enhanced
11.2

The following measures were collected for 74 different types of cars:

- X_1 - price
- X_2 - mpg (miles per gallon)
- X_3 - headroom (in inches)
- X_4 - rear seat clearance (distance from front seat back to the rear seat, in inches)
- X_5 - trunk space (in cubic feet)
- X_6 - weight (in pound)
- X_7 - length (in inches)
- X_8 - turning diameter (clearance required to make a U-turn, in feet)
- X_9 - displacement (in cubic inches)

The dependence of **turning diameter (X_8)** on the **length (X_7)** of a car can be depicted in a **scatterplot**. Every car is represented in the diagram by a single point (X_7, X_8). Moreover, an estimated **regression line** is added in the picture (it is drawn in black).



regression function

$$\text{turn-diam} = 7.1739 + 0.1735 * \text{length}$$

correlation coefficient $r = 0.90$

SS-Total = 1361.96

SS-Residual = 259.06

SS-Error = 1102.90

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1.1
1.2
1.3
2.1
2.2

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