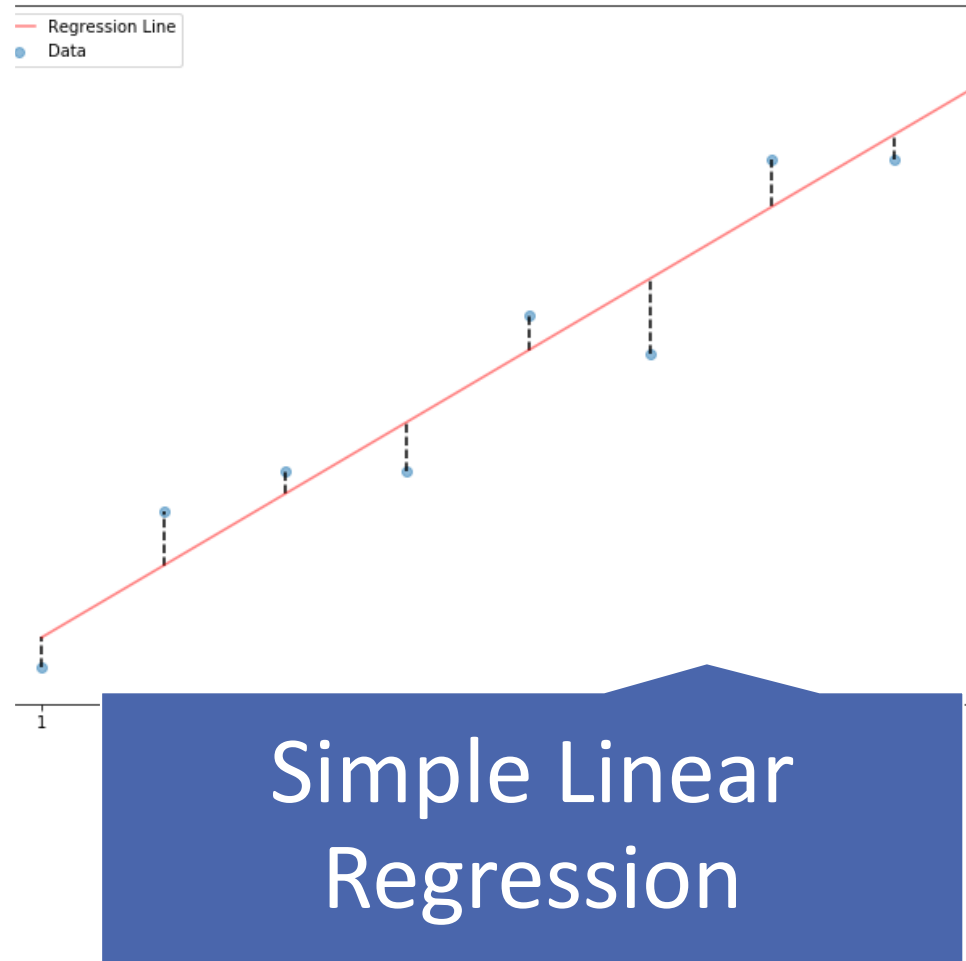


Regression Analysis – Simple Linear Regression Model



Linear Regression

The purpose of simple linear Regression is to explain (the variation in) a dependent variable by (the variation in) a single independent variable.

- dependent / explained / predicted Variable: Movie Revenue (Y)
- independent / explanatory / predicting Variable: Movie Budget (X)

→ Setting up a linear equation (straight line):

$$\text{Revenue } Y_i = a + b \text{Budget } X_i + \varepsilon_i$$

X_i : ith observation of the independent variable X
 Y_i : ith observation of the dependent variable Y
 a : regression intercept term
 b : regression slope coefficient
 ε_i : residual for the ith observation (error term)

Linear Regression – Visual Interpretation

