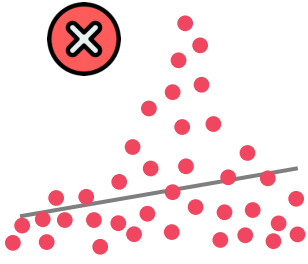
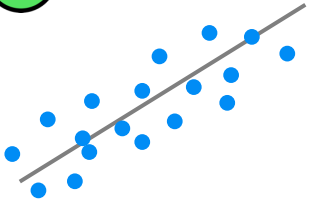


Assumptions of Linear Regression



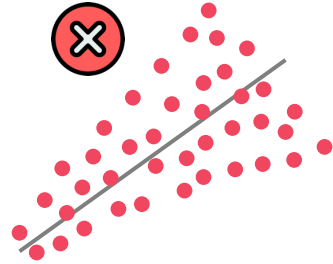
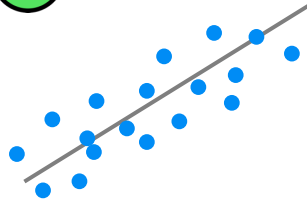
1. Linearity

(Linear relationship between Y and each X)



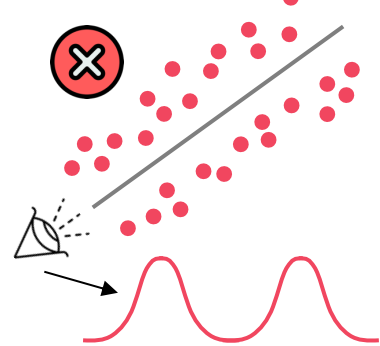
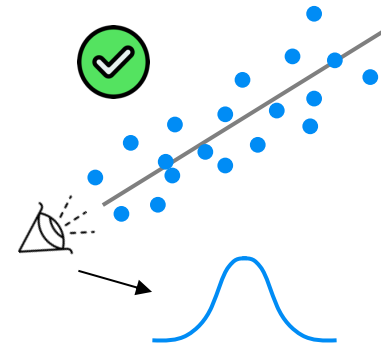
2. Homoscedasticity

(Equal variance)



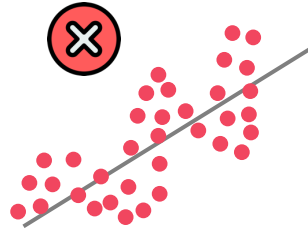
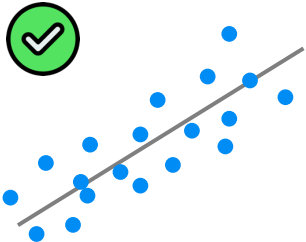
3. Multivariate Normality

(Normality of error distribution)



4. Independence

(of observations. Includes "no autocorrelation")



5. Lack of Multicollinearity

(Predictors are not correlated with each other)



$$X_1 \not\sim X_2$$



$$X_1 \sim X_2$$

6. The Outlier Check

(This is not an assumption, but an "extra")

