Objective: To perform simple linear regression with one-dimensional input and output

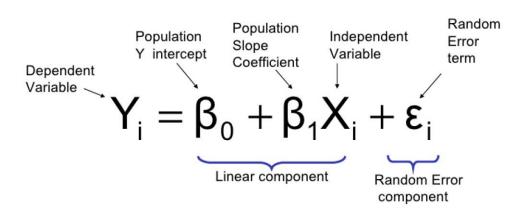
Approach:

Steps in building regression model

Create data using scikit-learn (Number of samples = 1000, Add noise). Do not download data from internet

- 1. Pre-process it.
- 2. Creating train and test datasets
- 3. Visualization and descriptive analytics of patterns present in the data
- 4. Model building (simple linear regression)
- 5. Validation and evaluation of model.

Might be helpful:



$$\hat{\beta}_0 = \bar{y} - \hat{\beta}_1 \bar{x};$$

$$\hat{\beta}_1 = \frac{\sum_{i=1}^n (x_i - \bar{x})(y_i - \bar{y})}{\sum_{i=1}^n (x_i - \bar{x})^2},$$