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

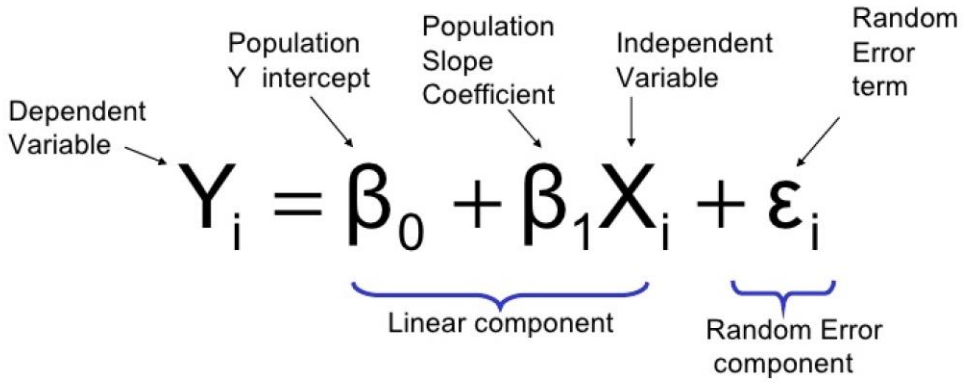
Approach:

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:



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

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