**Multicollinearity:**

Multicollinearity occurs when two or more independent variables are highly correlated with another in a Regression model

Is called Multicollinearity

**The Problem with Multicollinearity:**

It can be a problem in Regression model because we do not able to distinguish between the individual effects of independent variable on the dependent variable (i, e); Both Independent Variables give the same Related

Information.

**Causes of Multicollinearity:**

* It could be Exists because of Problem in the data set at the time of creation
* It could also occur when the new variables are created with dependent on other variables
* Including the Identical Variables in the Data set causes of multicollinearity
* In accurate use of Dummy Variables on also causes of Multicollinearity Problem and they also called in Dummy variables Trap

**Detecting Multicollinearity**:

* By using VIF (Variable Inflation Factor)

VIF🡺 it determines the Strength of the Correlation between the independent variables

* It’s is predicted by taking a variable by variable & Regressing it against Every other variable
* VIF🡺 (1/(1-R^2))
* VIF🡺 Starts at 1 & has no upper limit
* VIF🡺 1 No correlation between independent Variable & the other variables
* VIF🡺 > 5 is Correlation is moderately high
* VIF 🡺 > 10 means the correlation is Highly Correlated

**Fixing the Multicollinearity:**

Dropping the One by One highly Multi Co-related features will help of Bringing down the multicollinearity Between correlated features