- **RELATION SHIP ANALYSIS :**
- COR-RELATION : It's an matrix , its gives us of wider X perspective on what exactly are we dealing with hear and a Correlation matrix is a table showing. Correlation, Coefficients between variables.
- And each cell in the table shows the Correlation between two variable and correlation matrixs is used to summarize data as an input into a more advanced analysis and also as diagnostic for advanced analysis.
- And its is Explain how one or more variables are related to each others.
- **COR-RELATION CALCULATION : It is only calculate the data types of integers, floating only**
- x = [1, 2, 3, 4, 5, 6]
- y = [2,4,7,9,12,14]
- Formula $r = \frac{n\Sigma xy - \Sigma x.\Sigma y}{\sqrt{[n\Sigma x^2 - (\Sigma x)^2][n\Sigma y^2 - (\Sigma y)^2]}}$
-

x	y	xy	x^2	y^2
1	2	2	1	4
2	4	8	4	16
3	7	21	9	49
4	9	36	16	81
5	12	60	25	144
6	14	84	36	196
$\Sigma = 21$	$\Sigma = 48$	$\Sigma = 211$	$\Sigma = 91$	$\Sigma = 490$

- $r = \frac{n\Sigma xy - \Sigma x.\Sigma y}{\sqrt{[n\Sigma x^2 - (\Sigma x)^2][n\Sigma y^2 - (\Sigma y)^2]}}$
- So, here
- $n = 6$
- $\Sigma x = 21$
  $\Sigma y = 48$
  $\Sigma xy = 211$
  $\Sigma x^2 = 91$
  $\Sigma y^2 = 490$

- $r = \frac{n\Sigma xy - \Sigma x.\Sigma y}{\sqrt{[n\Sigma x^2 - (\Sigma x)^2][n\Sigma y^2 - (\Sigma y)^2]}}$
- $r = \frac{6(211) - 21(48)}{\sqrt{[6 * 91 - (21)^2][6*490 - (48)^2]}}$
- $r = \frac{1266 - 1008}{\sqrt{[546 - 44][2940 - 2304]}}$
- $r = \frac{258}{\sqrt{[105][636]}}$
- $r = \frac{258}{\sqrt{[105 * 636]}}$
- $r = \frac{258}{\sqrt{[66780]}}$
- r = 0.998