

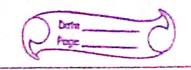
	Corcrelation Analysis: > It is a statistical tool used to measure the strength of the linear relationship blu two variables and Compute their association.					
	i.e. Congelation analysis calculas the level of change in one variable due to the change in the other.					
- High Correlation => Strong relationship 6/w two variationship 6/w two variationship						
	- If two variables are Cornelated then it does not mean that one Causes the other.					
Kinds of Corvelation:> (i) Positive Govelation:> If the values of the two vari						
	X Increases then y Increases					
0	ie. X & Y behave alike.					
	X 2 5 8 11 Positive Convictation. Y 18 25 36 50 Positive Convictation. Es. family Income and Expenditure on luxury Henry are positively Correlated.					
(2)	Negative Convielation: > If the values of two variables deviate					
	(moves) in the opposite direction it. X Increases then Y decreases. X decreases then Y Increases.					
	X 8 4 3 Negative Y 8 10 15 25 Correlation — X Eg. Price and demand of Commodity.					
74						



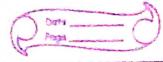
The state of the s								
(3)	e does not affect							
	the other.							
acception promotely graphs and grammer is the classification and promotely grapher for	And the second s	/ ;						
And the second section of the second of the		· /. :						
		<u>/···</u>						
may apply the above special of the me the Makes may see a filter party and the manuscrating for the special of	Fosi Example; there is no Cosvictotion	between the age of						
	the student and the mosks obtained by him/her.							
\rightarrow	> If there is no correlation blw two variables then this							
	Implies that there is no linear relationship boly them.							
->	-> However, there may exist some strong Cuivilineau (non-							
	linear) suelationship between the two variables.							
		A Charles						
	Karl-Pearson Grucelation Coefficient;							
		. 0						
	on by is a measure							
that determines the degree to which the movement o								
	two different variables is associated.							
	- It is used to measure the linear relationship b/w two variables. - It is also known as Covariance Method.							
	$\mathcal{H} = G_{\mathcal{U}}(x,y) = G_{\mathcal{V}}(x,y)$							
3 2	$\sigma_{\mathbf{y}}$							
	Voy(x) x Voy(y) ox.	1						
	1)							
Neichteide anneile im 2000 magainte								
$GV(x,y) = \sum (x-\overline{x}) \cdot (y-\overline{y})$								
n								



ПО						
- The value of se on g al	ways lies blu EI, IJ.					
The shert It is been	IT the grant it is perfect positive Converting					
- I It u=-1; then it is berefect nel other Correlation						
- If st=0; then there is no	linear relationship on Texa					
Corvielation.						
Juati Juati	141 16					
Lauge	914 medium Positive					
boulect	POSPILIE					
positive	·/·					
1. 31 f -1	1 0					
medium	% ≈ -1 Perfect Negative					
negative	No.					
	4(20.					
	No Guyelation.					
	/, Tevo					
•/-						
& X: -2 -1 0 1 2	2					
Y; 4 1 0 1 4	The second					
XY: -8 -1 0 1 8						
$y = G_{V}(x,y) = E(xy) - E$	E(x).E(y)					
$\sigma_{\chi},\sigma_{\chi}$ σ_{χ},σ	y					
E(x) = 0, $E(y) = 2$, $E(xy)$	= 0					
=) Cov(xy) =0 =) r=0 =) Tene Correlation						
=> There is	no linear relationship blu X & V.					
	1					



-						
	-	If value of se is very alore to zero ic. let se E (-0.1, 0.1)				
	-	then there is no linear relationship blu the two variables.				
		THE THE MANUEL ACTUMENTS THE TWO WESTERS.				
		If X and Y are Independent, then				
		$E(xy) = E(x) \cdot E(y)$				
		$\Rightarrow Gv(x,y) = 0 \Rightarrow y = 0$				
		So => zeu Gourelation or no dineau relationship b/w				
		× and Y.				
A, 1800 - 1800		Converse need not to be true.				
-	Que					
	=	X and Y is 0.96. Find the values of ox and ox when				
		it is given that warry				
		it is given that $\frac{Vaxx}{VaxY} = \frac{4}{9}$.				
	Soi	$H = Gv(X,Y) = \pm 1 OH - 1 (Perfect Gurdation)$				
	$\frac{d}{dx} = \frac{dx}{dx} = \frac{dx}$					
		5x, 5y >0 (always)				
		and $G_{V}(x,y) = 0.96 > 0$				
		\Rightarrow $y \Rightarrow 0$ $y = 1$				
		4				
		= 1 = 0.96 = 5 = 0.96				
	-	$\sigma_{\chi}, \sigma_{\chi}$				
	- Marie - Mari	and σ_x^2 $y \Rightarrow \sigma_y = 2\sigma_y$				
-		and $\frac{\sigma_{\chi^2}}{\sigma_{y^2}} = \frac{4}{9} \Rightarrow \frac{\sigma_{\chi} = 2\sigma_{y}}{3\sigma_{y}}$				
		$\therefore \sigma_{x} \sigma_{y} = 0.96$				
	igen (†	$\frac{1}{3} \frac{2}{5} \frac{\sigma_y^2}{1} = 0.96 $				
		$\Rightarrow \sigma_{\chi} = 0.8$				
		A- U. B				



		21					
Que	Calculate & b/w X and Y from the following datab						
	X						
	no of paises	15	15				
4.5	Mean	25	18				
	Sum of Squares	136	138				
	of deviations from						
Part of the Part o	meon						
	and Summation of peroduct deviation of X and Y form						
	11	tive mean					
	ie. $\sum (x-\overline{x})(y-\overline{y}) = 122$						
m = 16							
	$\overline{X} = 95, \overline{Y} = 18$ $\sum (x - \overline{x})^2 = 136; \sum (y - \overline{y})^2 = 138$						
	<i>E</i>						
	$\frac{1}{2} = \frac{136}{2} = \frac{136}{2} = \frac{138}{2} = \frac{138}$						
	$G_{V}(x,y) = \sum (x-\overline{x}) (y-\overline{y}) = 22 $						
A comment			n	15			
	=) 41	= 0.8918	17-17-18-18-18-18-18-18-18-18-18-18-18-18-18-				
	A COLUMN TO THE REAL PROPERTY OF THE PARTY O		· · · · · · · · · · · · · · · · · · ·				