

Unit 9 - Slope applied to CI and Hypothesis tests

2-variables

How to explain slope in context:

The y-var: _____ goes up/down _____ units for every one x-var: _____ goes up.

There is variation between slope and y-int of different samples, so investigate with CI + hypo test.

C.I with Slope

Formula:

$$b \pm t^* (SE)$$

Dof = $n - 2$

t^* : InvT, %, Dof

This C.I. gives range of true slope.

Context: we are _____ % conf
The true population slope of _____ is from _____ to _____.

If 0 is in our interval, it could be reasonable to conclude there is no association between the two-variables.

Computer outputs

variable	Coef	SE	t-ratio	prob
Constant	# y-int	^{standard error} y-int		
variable	# slope	^{standard error} slope		
	$r^2 = \#$	$S = \#$		

Variables

β = slope pop A = y-int pop
 b = slope sample a = y-int sample

Prob row: the probability we get that sample if true slope = 0.
So low prob = high chance of association

THE END!