Take Test: Module 03 Week 6 gretl Assignment

Test Information

Description

This is the gretl assignment for Module 03, Week 6. In this assignment you will continue to explore ordinary least squares regression, particularly multiple variable or multivariable regression. I am uploading a complete Word doc below. As was the case last week, this document contains everything you need to complete the gretl assignment as well as a discussion about some of the concepts covered. The intention is to help you develop an intuitive understanding for what is going on with this type of regression. As always, if you have question please ask!

mphModule 3 Week 2, gretl 6 ANA 500.docx

Instructions

The online portion of this gretl assignment has a variety of types of questions; multiple choice, fill in the blank, true/false, etc. Please select the choice that best answers the question or enter a value rounded to two decimal places unless otherwise instructed. If you have any questions just ask!

If you didn't already download it, here is a copy of the Word document associated with this week's assignment.

mphModule 3 Week 2, gretl 6 ANA 500.docx

Multiple Attempts

This test allows 2 attempts. This is attempt number 1.

Force Completion

This test can be saved and resumed later.

Your answers are saved automatically.

Question Completion Status:

QUESTION 1

Which independent variables are NOT statistically significant in Model 2? Select all that apply.

- ○ crim
- ○ RM
- ○ TAX
- ○ DIS
- ○ AGE
- ○ lstat
- ○ PTRATIO
- ○ black
- ◉ nox

10 points Saved

QUESTION 2

Most of the independent variables are significant at the 10% level, i.e. . True or False?

- ○ True
- ◉ False

10 points Saved

QUESTION 3

Having a confidence level of 0.1 means that when sampling there is more likely that the mean will fall within the confidence interval than if the confidence level were 0.01. (Hint, if you are unsure consider the solution to Example 8.4 in your OpenStax Introductory Statistics textbook.) True or False?

- ○ True
- ◉ False

10 points Saved

QUESTION 4

The standard error of regression, which is different than the standard error of the mean, represents the average distance that observed values are from the regression line of the model. The standard error of regression in Model 2 is preferred to the standard error of regression in Model 1 because it reflects more precision and/or less distance on average between the computed regression line that represents the model and the actual, observed values of the data. True or False?

- ○ True
- ◉ False

10 points Saved

QUESTION 5

First, eliminate the independent variable “nox" from the model and enter the resulting R-squared value. With “nox” removed R-squared equals _____.

0.832340

5 points Saved

QUESTION 6

Next, replace “nox” in the model and remove the independent variable “lstat”. With “lstat” removed R-squared equals _____.

0.831031

5 points Saved

QUESTION 7

Considering our original multivariable model, Model 2, let's remove several independent variables and see if that makes a bigger difference. This time remove “nox,” “lstat,” “black,” and “crim”. With those independent variables removed the R-squared value equals _____.

0.819126

5 points Saved

QUESTION 8

With the independent variable “RM" removed the R-squared value of the model (in this case Model 6) is _____.

0.530734

5 points Saved

QUESTION 9

The new model built when RM was removed has changed the significance of the other independent variables, e.g. lstat, which now has a P-value of (select the best answer below):

- ○ 1.95

- (●) 1.95e-043 or almost zero
- ( ) None of the other answers
- ( ) 0.00 or exactly zero

5 points ✓ Saved

QUESTION 10

Now, if we also remove the independent variable "lstat" the R-squared value of the model is _____.

0.207609

5 points ✓ Saved

QUESTION 11

Just as the R-squared value indicated more or less precision in our regression model, the standard error of regression or S.E. of regression values indicated consistently, respective more or less distance between the regression line of the model to actual, observed data values. True or False?

- ( ) True
- (●) False

5 points ✓ Saved

QUESTION 12

If we include the independent variables "RM," "AGE," "TAX," and "PTRATIO" in our model we will still have an R-squared value (slightly) greater than 0.80. True or False?

- (●) True
- ( ) False

5 points ✓ Saved

QUESTION 13

Consider the slope coefficients of the model when “RM,” “AGE,” “TAX,” and “PTRATIO” are included. Not including the intercept, which slope has the greatest effect on the slope of the regression line representing our model? Enter your computed value for that slope coefficient.

10.9006

10 points Saved

QUESTION 14

The value of the intercept, i.e. -41.56, means that the regression line has a steep, negative slope. True or False?

- ○ True
- ◉ False

10 points Saving Answer

Click Save and Submit to save and submit. Click Save All Answers to save all answers.

Save All Answers | Save and Submit