Quiz

Due Nov 26 at 9:40am	Points 30	Questions 22	Available Nov 26 at 9am - Nov 26 at 9:40am 40 minutes
Time Limit 30 Minutes			

Instructions

Dear Participants,

This is an In-class quiz on Supervised Learning- Regression course. It has 22 questions and the duration is 30 mins.

Datasets to be used:

insurance-1.csv 🜠

Regards,

Program Office

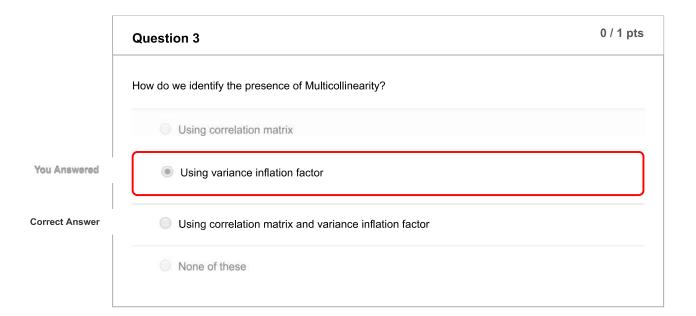
Attempt History

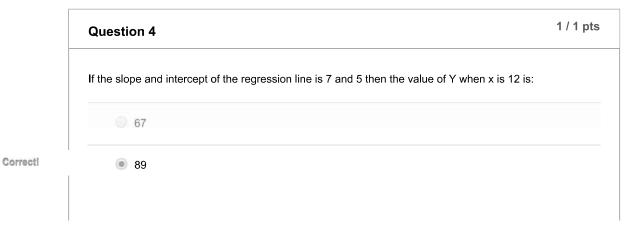
	Attempt	Time	Score
LATEST	Attempt 1	16 minutes	2 out of 30

Score for this quiz: **2** out of 30 Submitted Nov 26 at 9:30am This attempt took 16 minutes.

	Question 1 1/3 pts
	Insurance Dataset: Select all the codes that generate dummy variables for the following variables in insurance dataset? Column_names = ['sex', 'children', 'smoker', 'region']
Correct Answer	df_encode = pd.get_dummies(data = df, prefix = None, columns = Column_names, drop_first= True, dtype='int')
	df_encode = pd.get_dummies(data = df, prefix = None, columns = Column_names, drop_first= True, dtype='str')
Correct!	df_encode = pd.get_dummies(data = df, columns = Column_names, drop_first=True, dtype='int8')
Correct Answer	df_encode = pd.get_dummies(data = df, prefix = None, drop_first= True, columns = Column_names)

0 / 3 pts Unanswered Question 2 Using the beta estimates, predict the charges for the following customer profile: Customer_id BMI Children Smoker Sex Region Age 2578 63 Male 45.9 2 Yes northeast 0.1338 13.2456 12.918 **Correct Answer** 0 10.4614





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0 / 1 pts Unanswered **Question 5** In the regression line $y = \beta_0 + \beta_1 x$, if β_0 is 0 then **Correct Answer** The line of best fit passes through the origin Does not crosses the x axis The line of best fit cuts the X axis to the right of the Y axis The line of best fit cuts the X axis to the left of the Y axis

0 / 1 pts Unanswered Question 6 In a linear regression problem, if we add a feature in linear regression model and retrain the same model then If R Squared increases, this variable is significant. If R Squared decreases, this variable is not significant. **Correct Answer** Individually R squared cannot tell about variable importance. None of these

0 / 1 pts Unanswered **Question 7** Which of the following method(s) is used to predict the continuous dependent variable. Correct Answer Simple Linear Regression **Correct Answer** Multiple Linear Regression Logistic Regression Multinomial Regression

Question 8	1 pts
Logistic Regression transforms the output probability to be in a range of [0, 1]. Which of the following function is used by logistic regression to convert the probability in the range between [0,1].	
Sigmoid	
Mode	
Probit	
Square	
	Logistic Regression transforms the output probability to be in a range of [0, 1]. Which of the following function is used by logistic regression to convert the probability in the range between [0,1]. Sigmoid Mode Probit

Unanswered Question 9

[Insurance Dataset]: In the given insurance dataset, if a multiple linear regression model is built as below, what is the coefficient of sex_male?

charges ≈ age + bmi + children + sex_male + smoker_yes + region_northwest + region_southeast + region_southwest

Note: Convert sex, smoker and region into dummy variables for the levels given above.

Correct Answer

-131.3

475.5

-352.96

Unanswered

Question 10

In a simple linear regression model (One independent variable), If we change the input variable by 1 unit.

What will be the change in output?

By 1

No change

By intercept

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(-1, 1)	
○ (0, ∞)	

Unanswered Question 14 [Insurance Dataset]: If a multiple linear regression is built for the following variables, what will be the standard error for southeast region? charges ≈ age + bmi + children + sex_male + smoker_yes + region_southeast + region_southwest Correct Answer 415.338 478.692 423.888

Unanswered Question 16 Logistic regression assumes a: Linear relationship between continuous predictor variables and the outcome variable.

Unanswered	Question 20 0 / 1 pts	
	Which of the following selection method cannot be used if number of variables is less than number of observations?	
	Forward Selection	
	Backward Selection	
	Mixed Selection	
Correct Answer	Any of these can be used	

Unanswered	Question 21	0 / 1 pts
	What will be the output of the logistic regression?	
Correct Answer	Probability	
	Scores of the regressors	
	Log odds	
	Probability and log odds	

Unanswered	Question 22	0 / 1 pts
	Which of the following is/are assumptions of Logistic regression?	
	Linear relationship between dependent and independent variables	
	Residuals are normally distributed	
orrect Answer	Little or no multicollinearity among the independent variables	

Correct Answer

Outcome or response variable can be binary or multinomial

Quiz Score: 2 out of 30