

Question 1 A
Question 2 A
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Question 12 A B D

Question 13 - 14 : Explain the term regularization?, Which particular algorithms are used for regularization?

Regularization are techniques used to reduce the error by fitting a function appropriately on the given training set and avoid overfitting. There are two techniques in regularization:

Lasso(L1) and Ridge(L2) regression

Lasso: It will start making the variables values to the zero. Suppose the variables giving the data certain positive or certain negative coefficient. Lasso will internally think coefficient

values of this variables, this variable could be zero also. Its automatically think which variable highly required or not

Ridge: It will not make any variable value to zero. It reduce value of coefficient. There some of value with positiveley and negatively coefficient impact on output. It reduce coefficient

values between positive and negative values then predict answer much more better.

Inside the Lasso and Ridge we have parameter alpha value. (In here there are very small values 0.001,0.01,0.1). Its try to edges coefficient values, so module can be tune properly coefficient. There is in Regularization technique also ElasticNet: is combination L1 and L2. It will automatically do coefficient reduction

Question 15 : Explain the term error present in linear regression equation?

Linear Regression equation is $y=a+bx+e$ y is dependent variables, x is independent variables, a is intercept, b is coefficient/slope value, e is residual error. Residual error means is difference coming from actual answer and machine given answer