

Subjective Questions

Question-1:

1.What is the optimal value of alpha for ridge and lasso regression? What will be the changes in the model if you choose double the value of alpha for both ridge and lasso? What will be the most important predictor variables after the change is implemented?

Answer

The optimal value of alpha in ridge = 0.9 and Lasso is 0.001 if we change the alpha value , it model will become complex.

Lasso

'MSSubClass', -0.046),
('LotFrontage', -0.064),
('LotArea', 0.112),
('OverallQual', 0.172),
('OverallCond', 0.085),
('MasVnrArea', -0.033),
('BsmtFinSF1', 0.13),
('BsmtUnfSF', 0.027),
('TotalBsmtSF', 0.21),
('1stFlrSF', 0.051),
('2ndFlrSF', 0.041),
('GrLivArea', 0.021),
('BsmtFullBath', 0.056),
('FullBath', 0.071),
('HalfBath', 0.019)

Ridge:

[('constant', -0.027),
('MSSubClass', -0.042),

('LotFrontage', -0.04),
('LotArea', 0.078),
('OverallQual', 0.169),
('OverallCond', 0.083),
('MasVnrArea', -0.011),
('BsmtFinSF1', 0.149),
('BsmtUnfSF', 0.043),
('TotalBsmtSF', 0.144),
('1stFlrSF', 0.049),
('2ndFlrSF', 0.049),
('GrLivArea', 0.023),
('BsmtFullBath', 0.06),

Question-2

You have determined the optimal value of lambda for ridge and lasso regression during the assignment. Now, which one will you choose to apply and why?

Answer

Best params have been evolved from `model_cv.best_params_`

The regression which is used to reduce the coefficient near to 0 will be considered

Question-3

After building the model, you realised that the five most important predictor variables in the lasso model are not available in the incoming data. You will now have to create another model excluding

the five most important predictor variables. Which are the five most important predictor variables now?

Answer:

The top five are

4	OverallQ	0.1
	ual	54
1	GrLivAre	0.1
2	a	36
1	1stFlrSF	0.1
0		32
5	OverallC	0.0
	ond	84
4	MSZonin	0.0
1	g_RH	74

Question-4

**How can you make sure that a model is robust and generalisable?
What are the implications of the same for the accuracy of the model and why?**

Answer:

The model which is simple and the bias and variation needs to be balanced then the model is robust.