**50 Start Up**

1. Loading the dataset
2. library(glmnet) - To run Lasso and Ridge Regression
3. No NaN value in the data set
4. Boxplot: No Outliers found in Administration, R.D.Spend, Marketing.Spend
5. QQ Plot and QQ line shows Administration , R.D, Marketing is normally Distributed
6. No Transformation Methods used
7. Matrix will auto convert the categorical data to dummy variable
8. Data is split into X and Y.
9. X will contain all the variables except the predicting variable.
10. Y will contain the predicting variable.
11. Grid of values is created and values are used as Lambda value
12. Ridge and Lasso Regression is done both Lambda Min and Lambda 1 Standard Error

Grid Value Created with 10^Seq(15, -15, length = 150)

Ridge Regression

Lambda Min : 0.9507525

Lambda 1SE : 0.9430862

Lasso Regression:

Lambda Min : 0.9499488

Lambda 1SE : 0.9423379

Ridge Regression Lambda Min : 0.9507525 has the best R Sq Value.

**Computer Data Set**

1. Loading the Data
2. Removing unwanted Features from the data frame
3. No NaN found in the dataset
4. Boxplot shows No Outliner found in speed , HD. Outliner found in Price
5. Histogram: As price is constantly increasing. No Outliner Treatment given
6. Speed And HD Data are not normally distributed.
7. library(glmnet) - To run Lasso and Ridge Regression
8. Matrix will auto convert the categorical data to dummy variable
9. Data is split into X and Y.
10. X will contain all the variables except the predicting variable.
11. Y will contain the predicting variable.
12. Grid of values is created and values are used as Lambda value
13. Ridge and Lasso Regression is done both Lambda Min and Lambda 1 Standard Error
14. Grid Value Created with 10^seq(-5,15, length = 150)

Ridge Regression:

Lambda Min : 0.775567

Lambda 1SE :0.7694627

Lasso Regression:

Lambda Min : 0.775567

Lambda 1SE : 0.768266

Ridge and Lasso Regression Lambda Min has the best R Sq Value.

Toyoto Dataset

1. Loading the Data
2. Removing unwanted Features from the data frame
3. No NaN found in the dataset
4. Boxplot : Outliner Found in the Price and KM. Not treated.
5. Histogram: As price is constantly increasing. No Outlier Treatment given.
6. library(glmnet) - To run Lasso and Ridge Regression .
7. Matrix will auto convert the categorical data to dummy variable
8. Data is split into X and Y.
9. X will contain all the variables except the predicting variable.
10. Y will contain the predicting variable.
11. Grid of values is created and values are used as Lambda value
12. Ridge and Lasso Regression is done both Lambda Min and Lambda 1 Standard Error
13. Grid Value Created with 10^seq(-7, 8, length = 250)

Ridge Regression:

Lambda Min : 0.8542534

Lambda 1SE :0.8283338

Lasso Regression:

Lambda Min : 0.8606782

Lambda 1SE : 0.8506221

Lasso Regression Lambda Min has the best R Sq Value.