

## Summary of assignment 1

I performed exploratory data analysis on the dataset provided.

Found scatter plot for 'impressions' and 'spends' . From the scatter plot I analysed that linear regression would be a better fit. So I built a linear regression model and split the data into a training set and testing set. I trained the model with a training data set and found the best fit line which fits the data.

I also computed mean absolute error, mean square error and  $r^2$  score.

The values which I obtained are:

1. Mean absolute error = 148.58568349251203
2. Mean squared error = 116709.88952711831
3.  $R^2$  score = 0.4334107489599405

The  $r^2$  score which we determined helps us to evaluate the accuracy of the model

The  $r^2$  score always lies between 0 and 1 (both inclusive) . If the  $r^2$  score is 1, then the model is perfect. If the  $r^2$  score is 0, then our model is a failure.

Our model's  $r^2$  score is 0.44 . This implies that our model is not so accurate.