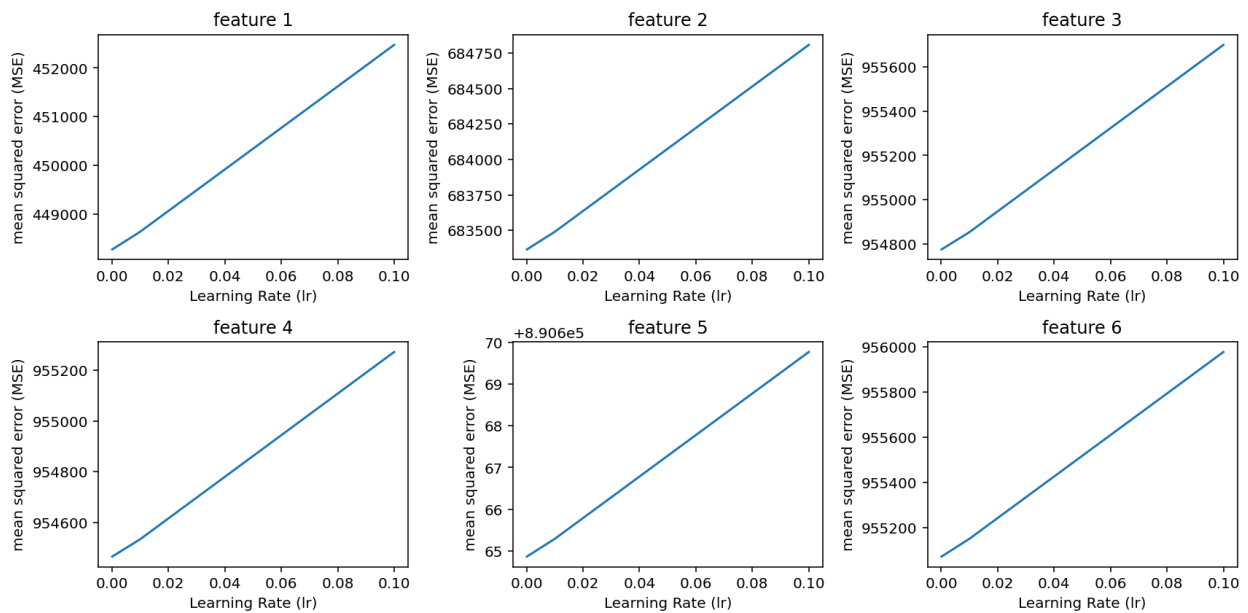**Name** : عبدالله بدر عبدالعزيز عبداللطيف

ID:2020171093
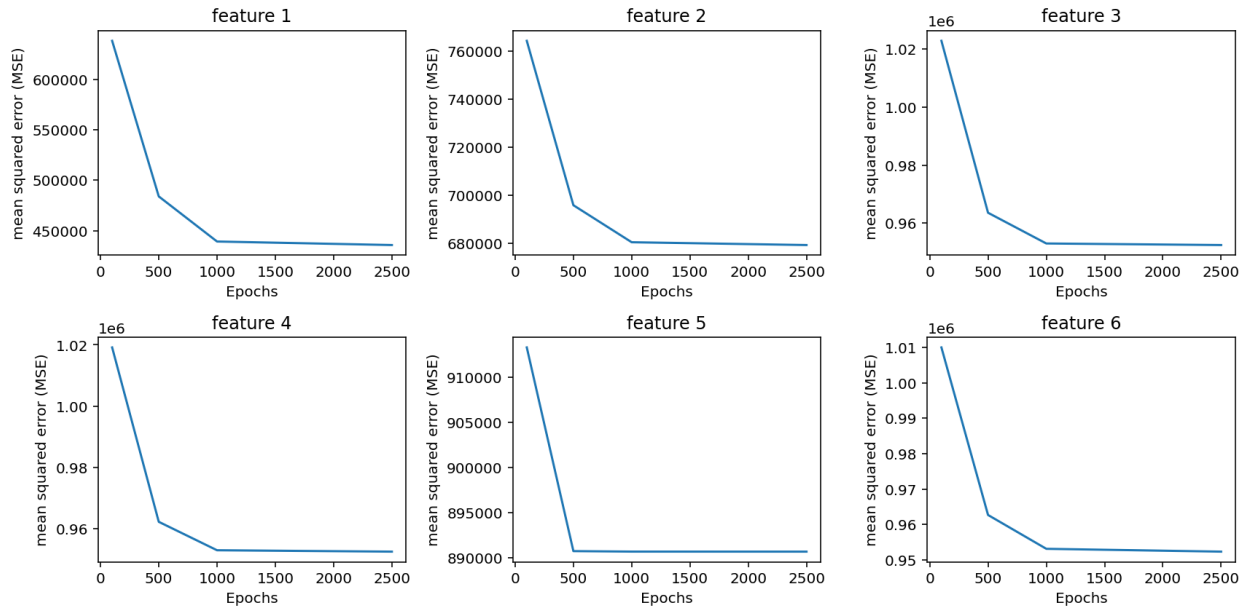
UMS-Level : level-4

Feature Number	MSE (mean square error) With epochs	Epochs	Learning rate	MSE (mean square error) with lr)
1	435891.21591 65255	100	0.1	448281.252 4986695
2	435891.21591 65255	100	0.1	448281.252 4986695
3	435891.21591 65255	100	0.1	448281.252 4986695
4	435891.21591 65255	100	0.1	448281.252 4986695
5	435891.21591 65255	100	0.1	448281.252 4986695
6	435891.21591 65255	100	0.1	448281.252 4986695

Plots Contains MSE vs Learning Rate(LR) :

feature 1

feature 2

feature 3

feature 4

feature 5

feature 6

Plots Contains MSE vs Epochs :

Conclusion:

From the sublots , we can conclude the best feature we can used to predict the revenue of the cafe shop is the first feature which is it : " Number of Customer " with mean sqaured error = 435891.2159165255