

1. Implement 5- fold cross validation for multiple linear regression (using Gradient descent optimization) on boston house prediction dataset. Run five iterations, in each iteration consider one-fold as test set and remaining four sets as training set. Find the beta ( $\beta$ ) matrix, predicted values, and R2\_score for each iteration using least square error fit.

Use the best value of ( $\beta$ ) matrix (for which R2\_score is maximum), to train the regressor for 70% of data and test the performance for remaining 30% data.