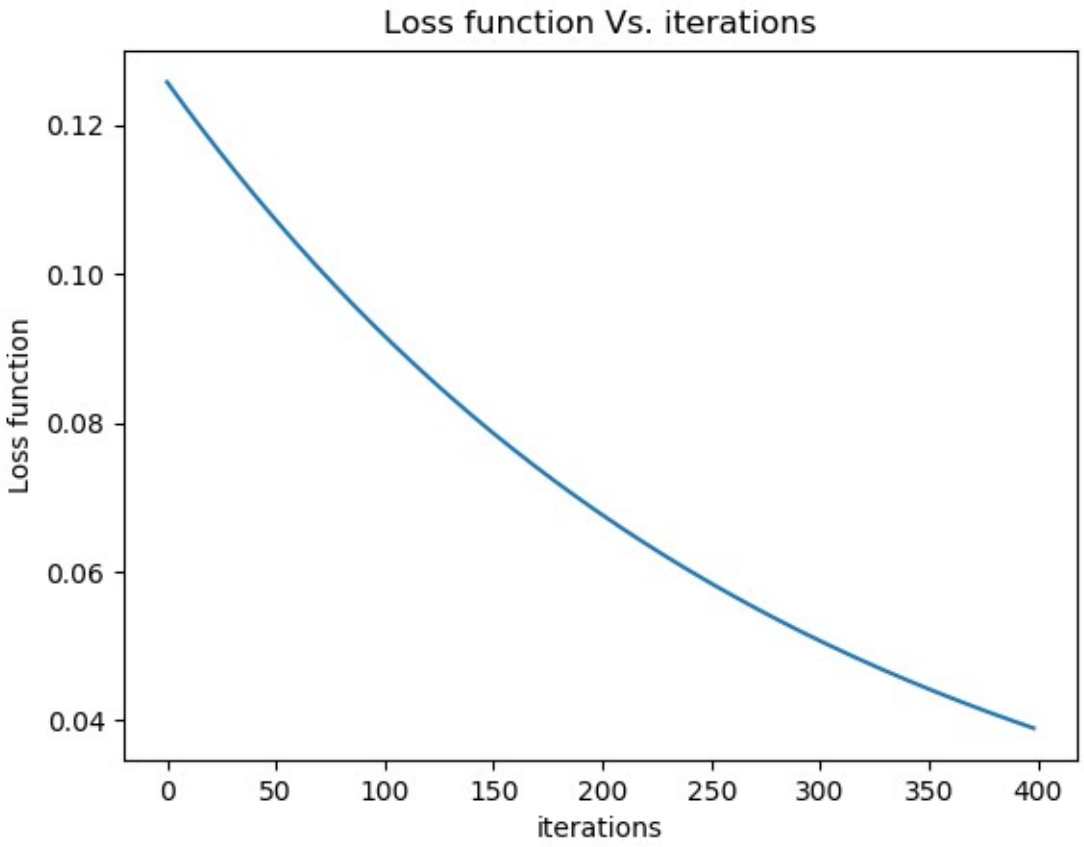
Assignment – 2

Vineet Kumar

For dataset = ‘winequality-white.csv’

(Conclusion at the end)

Loss curve at α = 0.001:

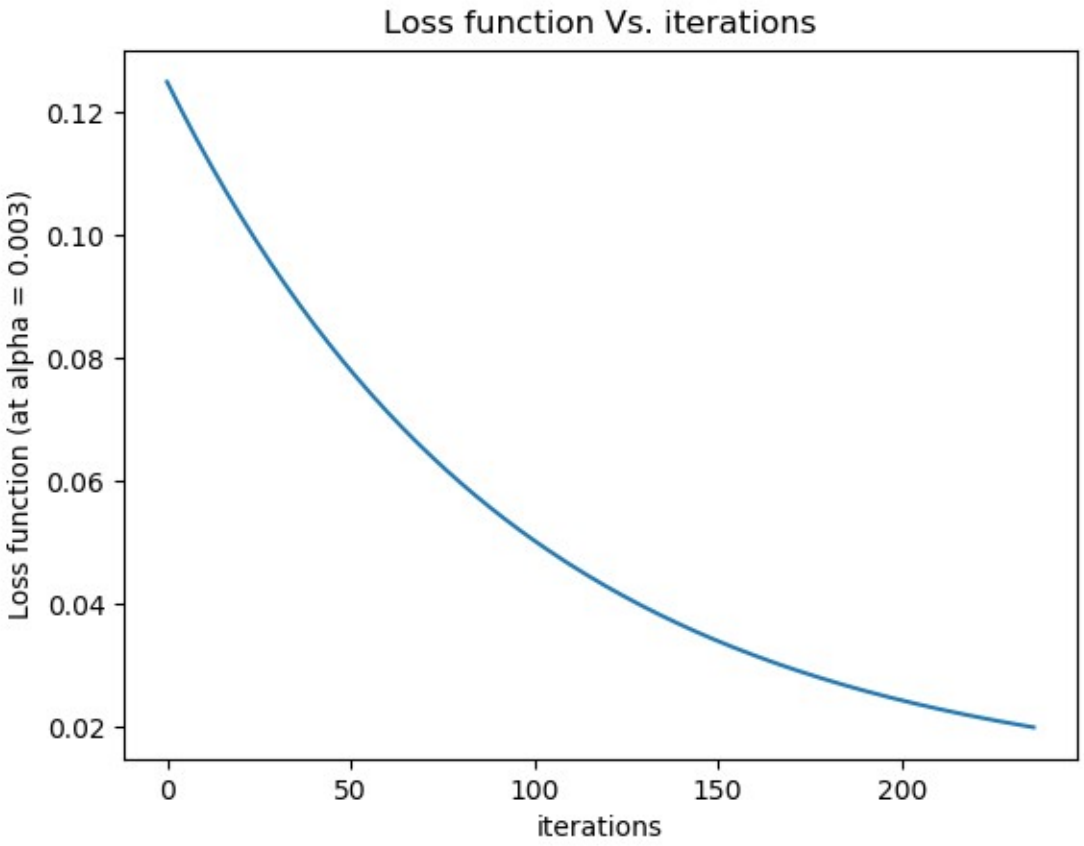


No. of iterations: 399

Root Mean Squared sum of Errors (RMSE): 0.07235408620670122

R-squared Value: 0.4463958106927639

Loss curve at α = 0.003:

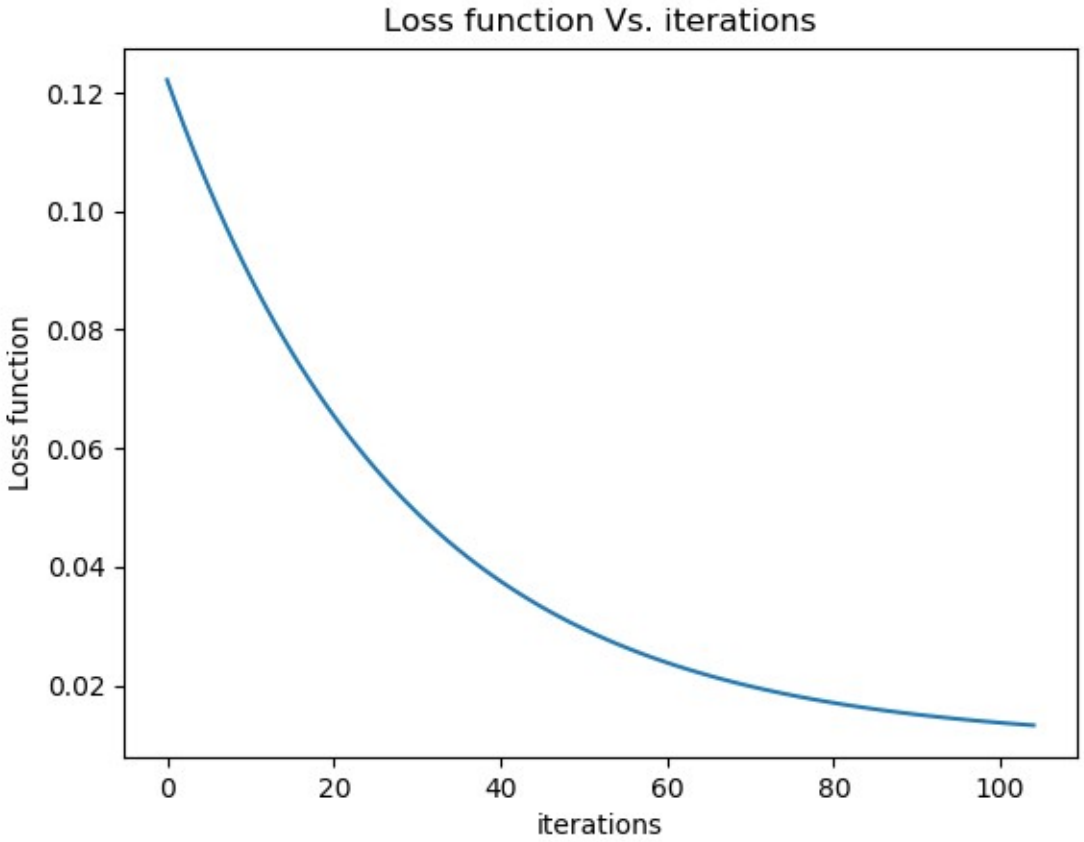


No. of iterations: 237

Root Mean Squared sum of Errors (RMSE): 0.049131393565992595

R-squared Value: 0.3718408865882463

Loss curve at α = 0.01:

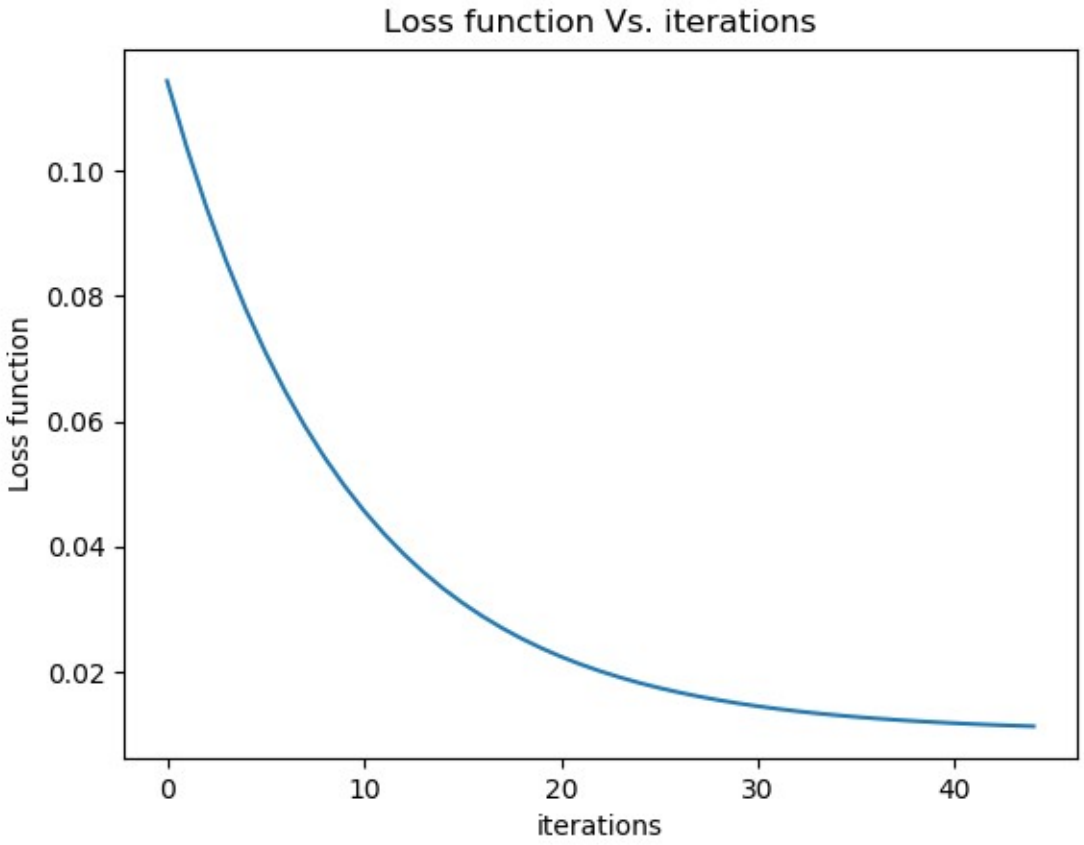


No. of iterations: 105

Root Mean Squared sum of Errors (RMSE): 0.037693363449838306

R-squared Value: 0.24315966890082485

Loss curve at α = 0.03:

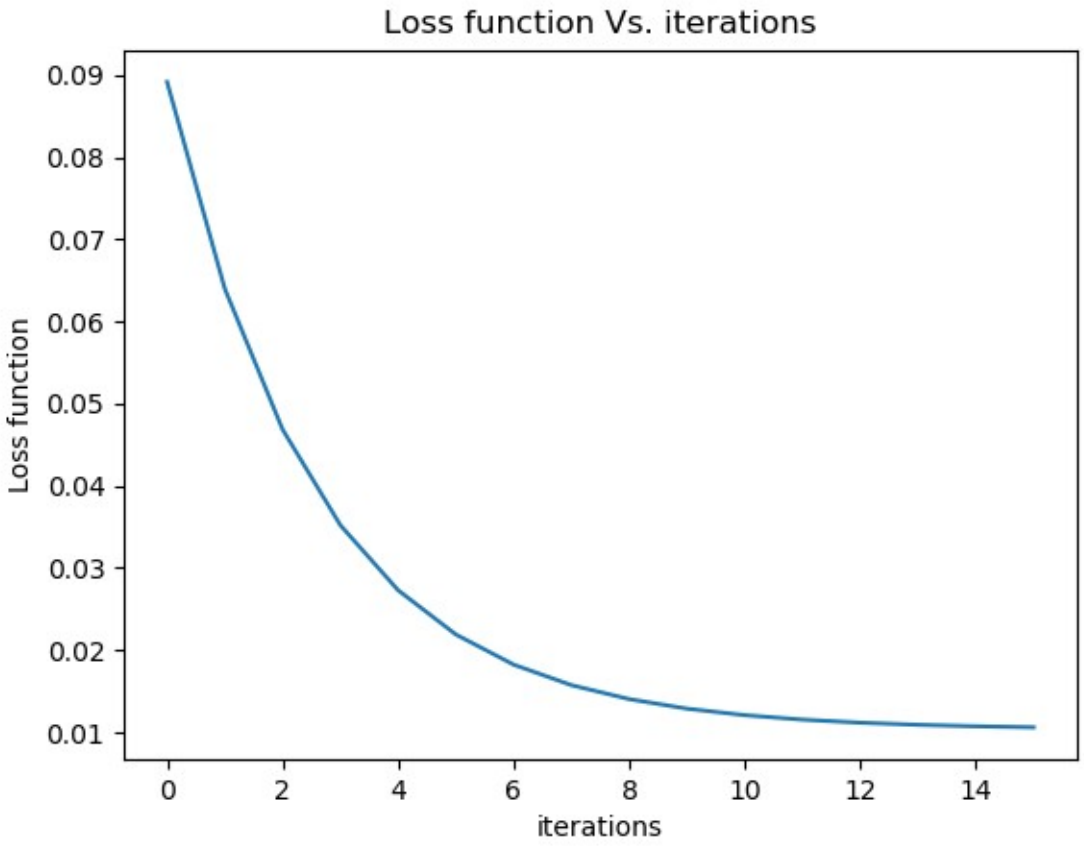


No. of iterations: 45

Root Mean Squared sum of Errors (RMSE): 0.03366825949133847

R-squared Value: 0.13874476332785285

Loss curve at α = 0.1:

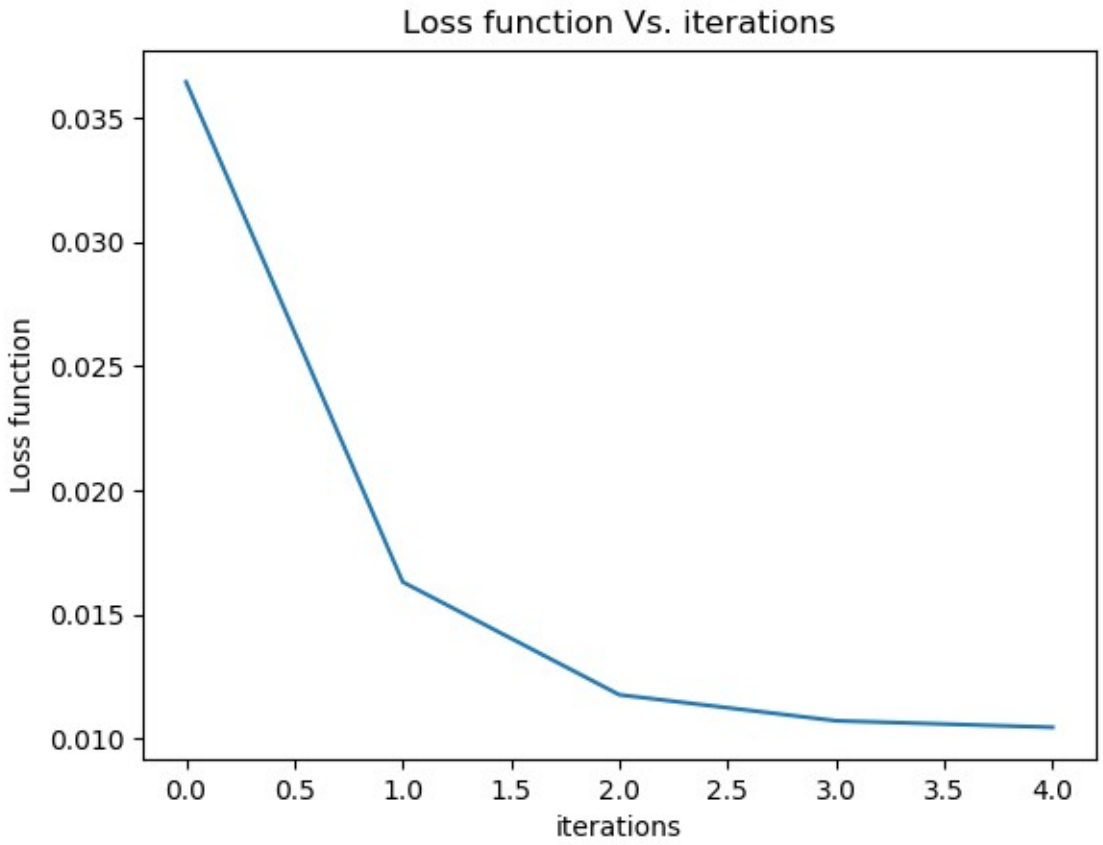


No. of iterations: 16

Root Mean Squared sum of Errors (RMSE): 0.032196179484979354

R-squared Value: 0.08500188943373593

Loss curve at α = 0.3:

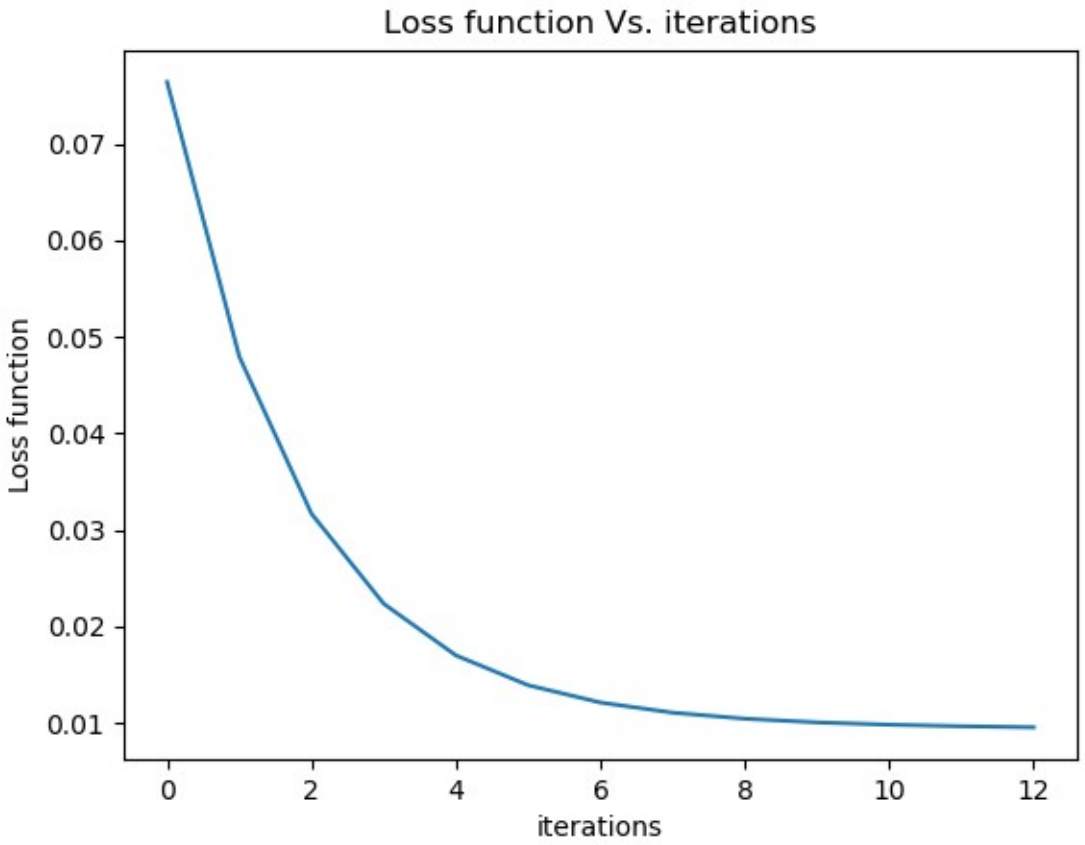


No. of iterations: 5

Root Mean Squared sum of Errors (RMSE): 0.03185145414293242

R-squared Value: 0.07222638401088864

Loss curve at α = 1:



No. of iterations: 13

Root Mean Squared sum of Errors (RMSE): 0.030538310829069323

R-squared Value: 0.1507266324382403

Conclusion:

α	**No. of iterations**	**RMSE**	**R^2-value**
0.001	399	0.07235408620670122	0.4463958106927639
0.003	237	0.049131393565992595	0.3718408865882463
0.01	105	0.037693363449838306	0.24315966890082485
0.03	45	0.03366825949133847	0.13874476332785285
0.1	16	0.032196179484979354	0.08500188943373593
0.3	5	0.03185145414293242	0.0722263840108886
1	13	0.030538310829069323	0.1507266324382403