COL772 ASSIGNMENT 1
MACHINE LEARNING

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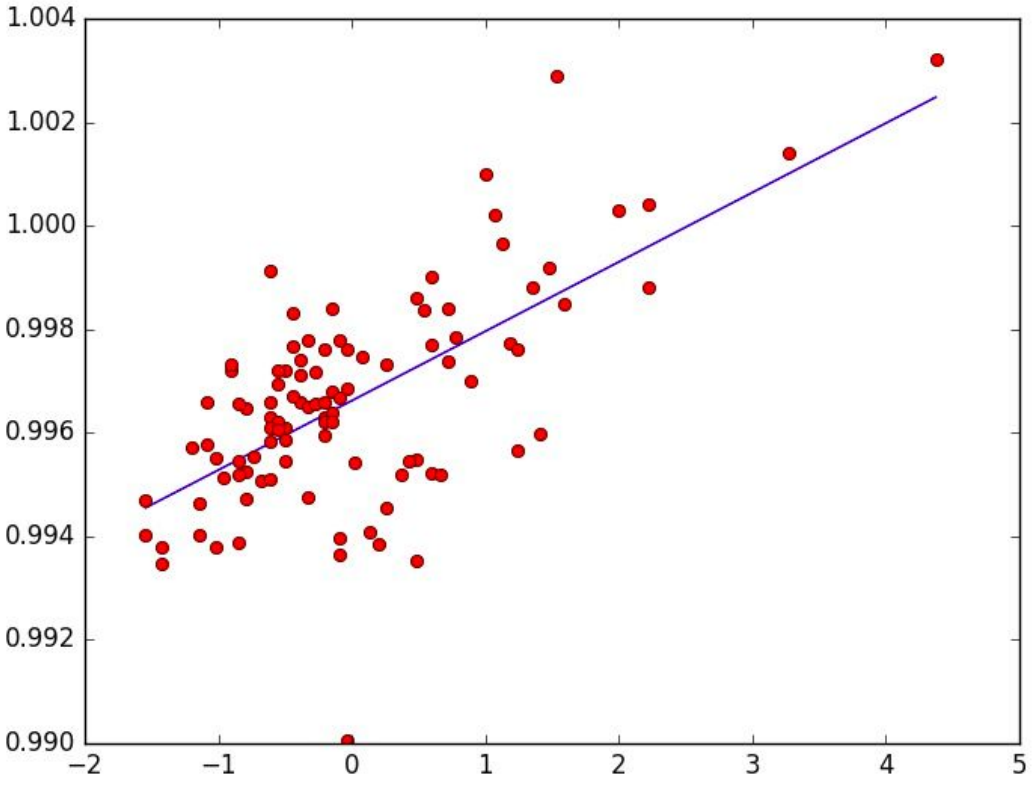
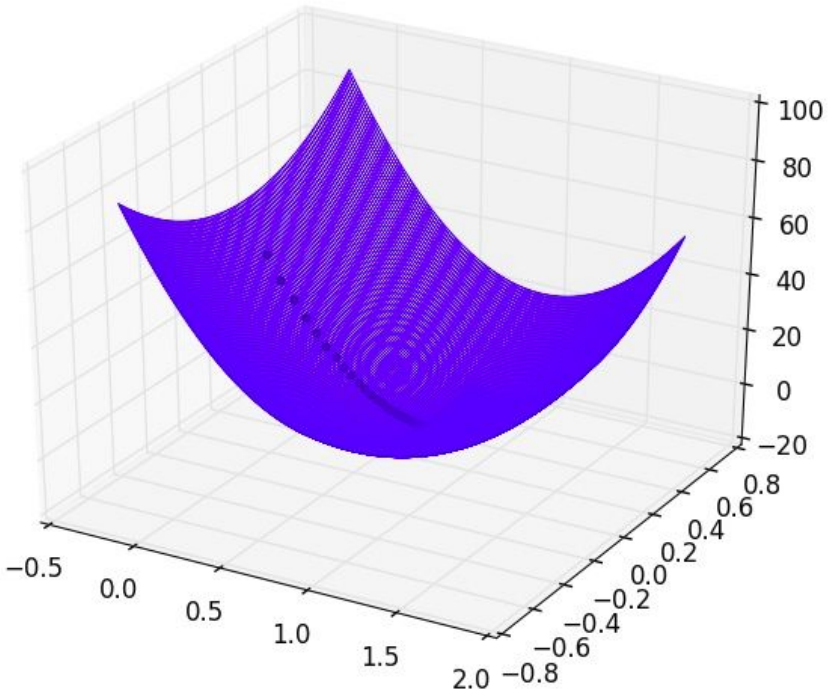
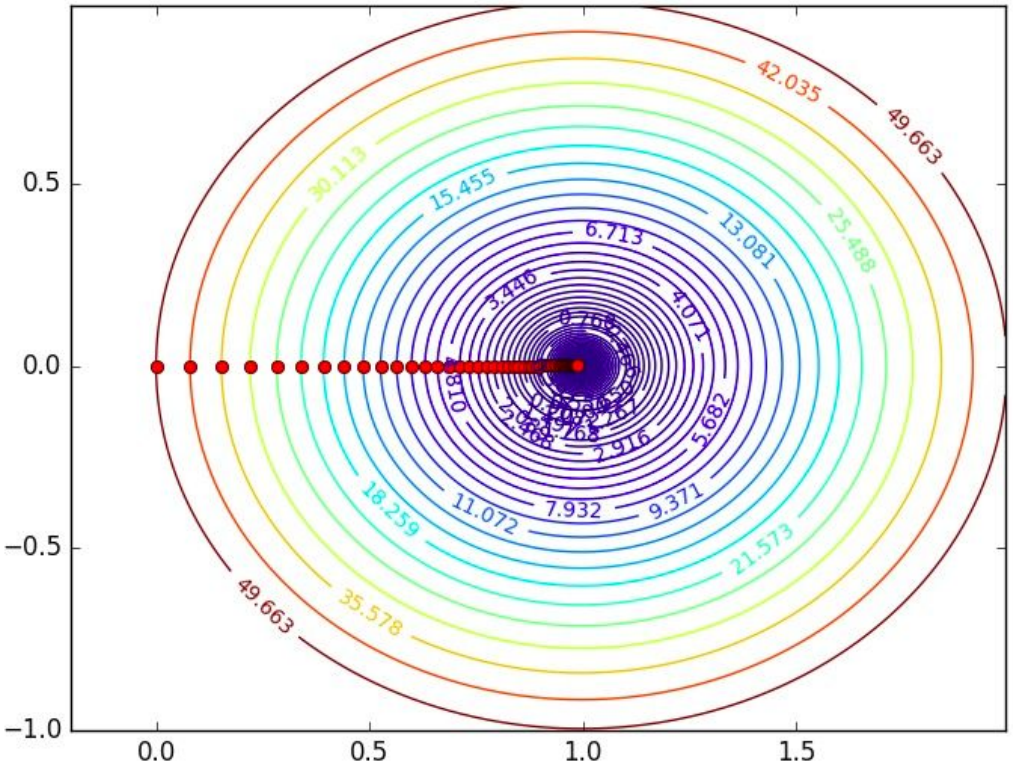
Part 1

Normalization of data is done. Linear Regression was done which works well for any number of input feature vectors. Gradient Descent was used for obtaining minima of the error function. Convergence condition used is the difference of error value approaching a small value.

Epsilon used = 10^(-15)
Learning rate = 0.0008
Number of Iterations = 222
Value of J-theta = 0.00011947898
Result => y = 0.00134 x + 0.9966
Plot



The 3-d plot for error function



Contour plot for the learning rate