**Instructions:**

1. **Project1\_dat.mat** : Data file and should be loaded first before running train.m and predict.m.

2. **Train.m** : This is written as a script file so just running it after loading data set will create M (degree of complexity), ,  (Mean) , **s** (standard deviation) and lambda.

This file also print variables like M, lambda, rms error on test set with regression model, rms error on whole set with neural network model.

3. **Predict.m(input matrix, target matrix, mean, S, ,M, lambda**): This file is written as a function with takes degree of complexity(M), matrix , lambda, Input Matrix , Target Matrix, ( Mean ) and Standard Deviation (s) and predict the error with those input values.

4 . **nn\_model.m(input matrix, target matrix)**: This file is written as funtion and take input matrix and target matrix to print rms error using Neural Network Model.

**Names of the important datasets(matrix):**

Input dataset (test+validation+training)= matTestSup

Target dataset (test+validation+training)= matSuperValid

Learning Dataset= matLearing

Learning Target matrix= ReleMat

Validation dataset=matValid

Validation Target matrix= ReleValid

Testing Dataset= matTest.

Test Target matrix= ReleTest

M=m

= Ww

= Mean

**S=** sd