**EXPERIMENT 1** :- THRESHOLD FREQUENCY = 45

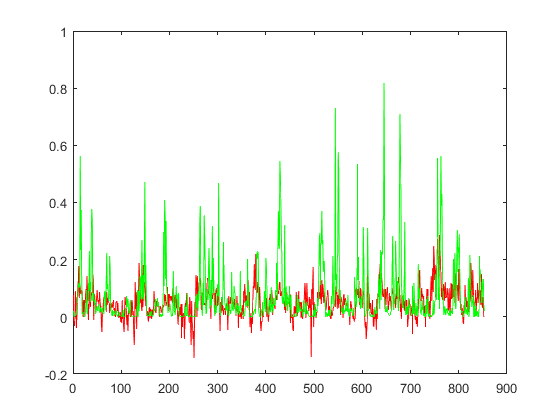
--------------- **RAINFALL NORMALISED | LINEAR KERNEL FUNCTION**  ---------------

|  |  |  |  |
| --- | --- | --- | --- |
| **INPUT** | | **MODEL** | |
| TRAINING SET | INSTANCES FROM 1 TO 3904 OF EXTMAT2 | SUPPORT VECTOR MACHINE REGRESSION MODEL | |
| TARGET FOR THE TRAINING SET | INSTANCES FROM 2 TO 3905 OF rain\_mum\_1969\_2007\_1grid\_norm | TRAINING | * mdl1\_2 = fitrsvm(X1\_2,Y1) * Trained using the predictor values in the matrix X1\_2 and the response values in the vector Y1 * X1\_2[3904 x 1010]=instances from 1 to 3904 of EXTMAT2 * Y1[3904 x 1]=instances from 2 to 3905 of rain\_mum\_1969\_2007\_1grid\_norm |
| TEST SET | INSTANCES FROM 3905 TO 4757 OF EXTMAT2 | PREDICTING | * yfit1\_2 = predict(mdl1\_2,Xp1\_2) * Xp1\_2 is the Test set * Xp1\_2[853 x 1010]=instances from 3905 to 4757 of EXTMAT2 |
| TARGET FOR THE TEST SET | INSTANCES FROM 3906 TO 4758 OF rain\_mum\_1969\_2007\_1grid\_norm | TESTING | * err1\_2= immse(yfit1\_2,Yp1) = **0.0109** * err1\_2 is the Mean Square Error * yfit1\_2[853 x 1]=predicted values on the Test set * Yp1[853 x 1]=instances from 3906 to 4758 of rain\_mum\_1969\_2007\_1grid\_norm |

PLOTTING : plot(yfit1\_2,'r')

hold on;

plot(Yp1,'g')



--------------- **RAINFALL NORMALISED | GAUSSIAN KERNEL FUNCTION**  ---------------

|  |  |  |  |
| --- | --- | --- | --- |
| **INPUT** | | **MODEL** | |
| TRAINING SET | INSTANCES FROM 1 TO 3904 OF EXTMAT2 | SUPPORT VECTOR MACHINE REGRESSION MODEL | |
| TARGET FOR THE TRAINING SET | INSTANCES FROM 2 TO 3905 OF rain\_mum\_1969\_2007\_1grid\_norm | TRAINING | * mdl2\_2 = fitrsvm(X1\_2,Y1,’KernelFunction’,’gaussian’) * Trained using the predictor values in the matrix X1\_2 and the response values in the vector Y1 * X1\_2[3904 x 1010]=instances from 1 to 3904 of EXTMAT2 * Y1[3904 x 1]=instances from 2 to 3905 of rain\_mum\_1969\_2007\_1grid\_norm |
| TEST SET | INSTANCES FROM 3905 TO 4757 OF EXTMAT2 | PREDICTING | * yfit2\_2 = predict(mdl2\_2,Xp1\_2) * Xp1\_2 is the Test set * Xp1\_2[853 x 1010]=instances from 3905 to 4757 of EXTMAT2 |
| TARGET FOR THE TEST SET | INSTANCES FROM 3906 TO 4758 OF rain\_mum\_1969\_2007\_1grid\_norm | TESTING | * err2\_2= immse(yfit2\_2,Yp1) = **0.0122** * err2\_2 is the Mean Square Error * yfit2\_2[853 x 1]=predicted values on the Test set * Yp1[853 x 1]=instances from 3906 to 4758 of rain\_mum\_1969\_2007\_1grid\_norm |

PLOTTING : plot(yfit2\_2,'r')

hold on;

plot(Yp1,'g')

