EXPERIMENT 3 :- THRESHOLD FREQUENCY = 45

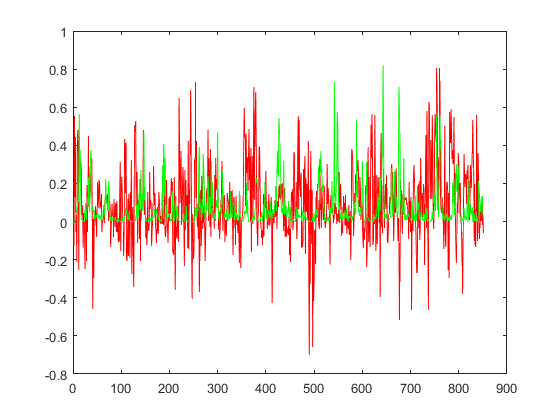
--------------- **RAINFALL NORMALISED | LINEAR KERNEL FUNCTION**  ---------------

|  |  |  |  |
| --- | --- | --- | --- |
| **INPUT** | | **MODEL** | |
| TRAINING SET | CONCATENATED INSTANCES FROM 1 TO 3904, FROM 2 TO 3905 AND FROM 3 TO 3906 OF EXTMAT2 | SUPPORT VECTOR MACHINE REGRESSION MODEL | |
| TARGET FOR THE TRAINING SET | INSTANCES FROM 4 TO 3907 OF rain\_mum\_1969\_2007\_1grid\_norm | TRAINING | * mdl7\_2 = fitrsvm(T4\_2,G) * Trained using the predictor values in the matrix T4\_2 and the response values in the vector G * T4\_2[3904 x 3030]=instances from 1 to 3904, from 2 to 3905 and from 3 to 3906 of EXTMAT2 * G[3904 x 1]=instances from 4 to 3907 of rain\_mum\_1969\_2007\_1grid\_norm |
| TEST SET | CONCATENATED INSTANCES FROM 3905 TO 4755, FROM 3906 TO 4756 AND FROM 3907 TO 4757 OF EXTMAT2 | PREDICTING | * yfit7\_2 = predict(mdl7\_2,Tp4\_2) * Tp4\_2 is the Test set * Tp4\_2[851 x 3030]=instances from 3905 to 4755, from 3906 to 4756 and from 3907 to 4757 of EXTMAT2 |
| TARGET FOR THE TEST SET | INSTANCES FROM 3908 TO 4758 OF rain\_mum\_1969\_2007\_1grid\_norm | TESTING | * err7\_2= immse(yfit7\_2,Gp) = **0.0466** * err7\_2 is the Mean Square Error * yfit7\_2[851 x 1]=predicted values on the Test set * Gp[851 x 1]=instances from 3908 to 4758 of rain\_mum\_1969\_2007\_1grid\_norm |

PLOTTING : plot(yfit7\_2,'r')

hold on;

plot(Gp,'g')



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

|  |  |  |  |
| --- | --- | --- | --- |
| **INPUT** | | **MODEL** | |
| TRAINING SET | CONCATENATED INSTANCES FROM 1 TO 3904, FROM 2 TO 3905 AND FROM 3 TO 3906 OF EXTMAT2 | SUPPORT VECTOR MACHINE REGRESSION MODEL | |
| TARGET FOR THE TRAINING SET | INSTANCES FROM 4 TO 3907 OF rain\_mum\_1969\_2007\_1grid\_norm | TRAINING | * mdl8\_2 = fitrsvm(T4\_2,G,’KernelFunction’,’gaussian’) * Trained using the predictor values in the matrix T4\_2 and the response values in the vector G * T4\_2[3904 x 3030]=instances from 1 to 3904, from 2 to 3905 and from 3 to 3906 of EXTMAT2 * G[3904 x 1]=instances from 4 to 3907 of rain\_mum\_1969\_2007\_1grid\_norm |
| TEST SET | CONCATENATED INSTANCES FROM 3905 TO 4755, FROM 3906 TO 4756 AND FROM 3907 TO 4757 OF EXTMAT2 | PREDICTING | * yfit8\_2 = predict(mdl8\_2,Tp4\_2) * Tp4\_2 is the Test set * Tp4\_2[851 x 3030]= instances from 3905 to 4755, from 3906 to 4756 and from 3907 to 4757 of EXTMAT2 |
| TARGET FOR THE TEST SET | INSTANCES FROM 3908 TO 4758 OF rain\_mum\_1969\_2007\_1grid\_norm | TESTING | * err8\_2= immse(yfit8\_2,Gp) = **0.0122** * err8\_2 is the Mean Square Error * yfit8\_2[851 x 1]=predicted values on the Test set * Gp[851 x 1]=instances from 3908 to 4758 of rain\_mum\_1969\_2007\_1grid\_norm |

PLOTTING : plot(yfit8\_2,'r')

hold on;

plot(Gp,'g')

