





Lower right: 2-D highpass filter (Hi-Hi).

To apply this transform to a complete image, we group the pixels into  $2 \times 2$  blocks and apply Eqn. (1) to each block.

The energies of all four sub-band images have following % values:

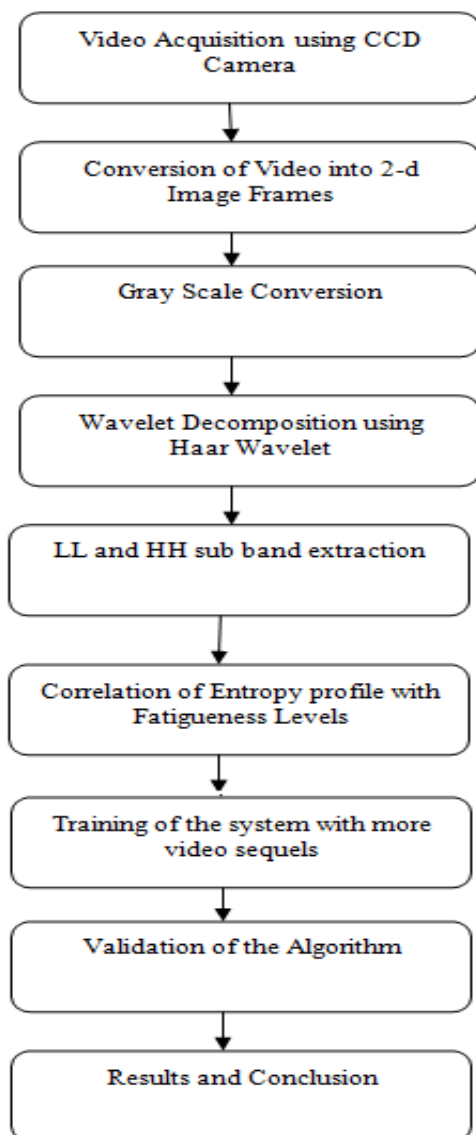
Lo – Lo Hi – Lo  
88.2% 4.0%  
Lo – Hi Hi – Hi  
6.3% 1.5%

point to the most significant compression of energy in the Lo-Lo subimage.

The wavelet coefficients are arranged as follows:

$$Coeff. = \begin{bmatrix} c_a & c_h \\ c_v & c_d \end{bmatrix}$$

**Flow Chart**



**5. Results**

**Driver Fatigueness Level Analysis Data**

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Date: 23-8-2014      Time: 16-18-16  
 File Path = D:\Program\Results.TXT  
 No. of Events = 30  
 Threshold Activity = 3.000000  
 Total Monitor Time = 60 secs.  
 Total Monitoring Interval = 2 secs.  
 Mean Entropy (Gray) over time 60 secs = 6.64  
 Mean Entropy (BW ) over time 60 secs = 0.95  
 Eye Open Time over time 60 secs = 30 secs.  
 Eye close Time over time 60 secs = 0 secs.  
 Yawning Effect over time 60 secs = 0.407654  
 ActiveStatus = f(E\_gray, E\_bw, ECT, EOT, Yawning)  
 ActiveStatus = K1.E\_gray + K2.E\_bw + K3.ECT + K4.EOT + K5.Yawning  
 ActiveStatus = (K1\*6.64) + (K2\*0.95) + (K3\*30.00) + (K4\*0.00) + (K5\*0.41) = 38.00

**6. Conclusion**

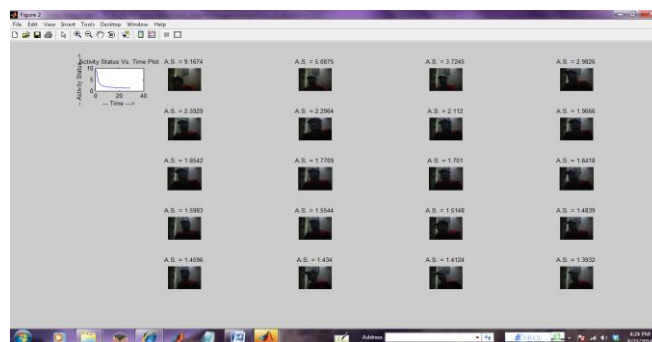


Figure 1: Snapshot of the Program

**Conclusion**

The proposed algorithm has been tested on personal car driver for testing purposes. For authentic results, the camera position has to be focused on the driver’s face. Further, the algorithm has been tested in day time driving. The results suffer in night car driving as the light from the following vehicles degrades the picture quality due to reflection.

**References**

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### Author Profile



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