SUMMARY

Our Project is on topic “***FACIAL EMOTION RECOGNITION BASED ON BIORTHOGONAL WAVELET ENTROPY AND SUPPORT VECTOR MACHINE***” under supervision of **Prof. Anupam Agarwal**.

For Feature Extraction we use Biorthogonal Wavelet Entropy (2 – level) and for Classification we have used Multi Class Support Vector Machines (MSVM’s).  
We have trained and tested our project on Standard JAFFE dataset as well as on a dataset created by our own group .

We have trained our software for 7 basic human emotions – Anger , Fear , Happy , Neutral , Sad , Disgust and Surprise.

A user friendly GUI is also created for the software.

Software Requirements to run our project are MATLAB , Wavelet Toolbox and Image Acquisition Toolbox whereas Hardware Requirement are WebCam and a system with minimum 4 GB RAM.

Results on standard dataset are analyzed using Confusion Matrix and ROC curves. Accuracy of our software is **79.3%.** There were overlapping results for similar emotions such as Disgust and Anger. So when we trained and tested our software for six emotions (excluding disgust) , then it leads to accuracy of 81.3%

Our Software can be modified and extended in future and there are various applications in numerous fields.

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