

TGL701	<p>Kannada and English Character Recognition using LBP-LTP histograms and BNN approach</p> <p>February 2019 – April 2019</p> <p>Handwriting recognition is one of area pattern recognition. The purpose of pattern recognition is to categorizing or classification data or object of one of the classes or categories. Handwriting recognition is defined (Plamondon. et. al 2000) as the task of transforming a language represented in its spatial form of graphical marks into its symbolic representation. Each script has a set of icons, which are known as characters or letters, which have certain basic shapes (Plamondon. et. al 2000). The goal of handwriting is to identify input characters or image correctly then analyzed to many automated process system. The development of handwriting is more sophisticated, which is found various kinds of handwritten character such as digit, numeral, cursive script, symbols, and scripts including English, Tamil, Bangla, Arabic, Chinese, Latin and others. The automatic recognition of handwritten text can be extremely useful in many applications where it is necessary to process large volumes of handwritten data, such as recognition of addresses and postcodes on envelopes, interpretation of amounts on bank checks, document analysis, and verification of signatures (Impedovo 1994). Therefore, computer is needed to be able to read document or data for ease of document processing. Propose approach use Local binary and ternary pattern images for feature extraction and classification is based upon back propagation neural network</p>
TGL702	<p>Infant Cry Analysis and classification based on MFCC, DWT, DCT, Kurtosis , Skewness and BNN model</p> <p>February 2019 – March 2019</p> <p>Crying is a communication method used by infants given the limitations of language. Parents or nannies who have never had the experience of taking care of the babies will experience anxiety when a infant cries. Therefore, we need a way to understand about infant's cry and apply the formula. This research develops a system to classify</p>

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	<p>the infant's cry sound using Back Propagation neural network and feature extraction based on combination of MFCC, DWT, DCT, Kurtosis and Skewness. Cry analysis is classified into 3 classes: hungry, discomfort, and pain. If classified as Pain more importance needs to be given.</p>
<p>TGL703</p>	<p>Number plate and Car model recognition using Morphological image processing and correlation</p> <p>February 2019 – March 2019</p> <p>An automatic and robust vehicle license plate recognition system has been developed. The proposed method uses scan line evaluation and averaging method to localize the number plate followed by a border removal mechanism combined with character mending and approximation of character height to extract the number plate characters.</p> <p>Finally, a template matching approach is used to recognize the characters. A Graphical User Interface has been created and the algorithm is experimented successfully on a variety of real images, both single as well as double line plates. The sample results obtained on testing with various images are also detailed.</p>
<p>TGL704</p>	<p>Virtual mouse implementation and its application for physically disabled using voice signals</p> <p>April 2014 – April 2014</p> <p>Speech recognition for the above is based on MFCC coefficient method. In the training phase all the voice inputs (left click, right click, double click etc) for mouse activities are extracted and stored for future processing. During the test phase again the same procedure is repeated. Java robot can be used here for mouse control activities like left click, right click, double click and cursor movements like left, right, up and down</p>

TGL705	<p>An adaptive audio watermarking based on the singular value decomposition in the wavelet domain</p> <p>February 2014 – February 2014</p> <p>This paper presents a secure, robust, and blind adaptive audio watermarking algorithm based on singular value decomposition (SVD) in the discrete wavelet transform domain using synchronization code. In our algorithm, a watermark is embedded by applying a quantization-index-modulation process on the singular values in the SVD of the wavelet domain blocks. The watermarked signal is perceptually similar to the original audio signal and gives high quality output. Experimental results show that the hidden watermark data is robust to additive noise, resampling, low-pass filtering, requantization, MP3 compression, cropping, echo addition, and denoising. Performance analysis of the proposed scheme shows low error probability rates. The data embedding rate of the proposed scheme is 45.9 bps. The proposed scheme has high payload and superior performance against MP3 compression compared to the earlier audio watermarking schemes.</p>
TGL706	<p>Audio watermarking based on SVD on frequency domain</p> <p>February 2014 – February 2014</p> <p>This paper presents a secure, robust, and blind adaptive audio watermarking algorithm based on singular value decomposition (SVD) using discrete cosine transform. In our algorithm, a watermark is embedded by applying a quantization-index-modulation process on the singular values in the SVD of the cosine(frequency) domain blocks. The watermarked signal is perceptually similar to the original audio signal and gives highly quality output. The output actually has better quality than the input signal.</p>
TGL707	<p>Speech Recognition using MFCC coefficients:</p> <p>February 2014 – February 2014</p> <p>The first step in any automatic speech recognition system is to extract features i.e.</p>

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	<p>identify the components of the audio signal that are good for identifying the linguistic content and discarding all the other stuff which carries information like background noise, emotion etc. The main point to understand about speech is that the sounds generated by a human are filtered by the shape of the vocal tract including tongue, teeth etc. This shape determines what sound comes out. If we can determine the shape accurately, this should give us an accurate representation of the phoneme being produced. The shape of the vocal tract manifests itself in the envelope of the short time power spectrum, and the job of MFCCs is to accurately represent this envelope.</p>
<p>TGL708</p>	<p>Image Enhancement and Video Enhancement using Bi-histogram equalization and Linear contrast stretching February 2013 – February 2013</p> <p>Description: The main aim of any enhancement scheme is to reveal the hidden details present in the image and to make the processed image more prominent compared to the host image. In this project bi-histogram equalization method is used to enhance the image and for enhancing the video, linear contrast stretching method is used. The application of image and video enhancement is vast. If the input image is too bright, after enhancing the pixel values will be stretched towards dark and vice versa. The project is implemented using Matlab 2008a.</p>
<p>TGL709</p>	<p>Pattern recognition using SIFT: February 2014 – February 2014</p> <p>Pattern recognition for images is one of challenging sector in image processing domain. It is very difficult to come to a conclusion whether two images of same object with different intensities, rotation and scaling parameters are matching or not. Many algorithms are developed for handling such problems, SIFT is one of the popularly used algorithms which deals with the above following parameters. Features of the images are extracted using SIFT algorithm, key points of the images are matched to arrive at conclusion whether the images are similar or not.</p>