(Andrezza et al., 2017; Cheng et al., 2017; Metwally, Khalil, & Abbas, 2017; Parthasarathy & Busso, 2017; Pervin, Afroge, & Huq, 2017)

Andrezza, I. L. P., Borges, E. V. C. d., Junior, I. A. d. A., Moto, R. A. T., Marques, J. R. T., & Batista, L. V. (2017). *Normalization Methods Analysis Applied to Face Recognition*. Paper presented at the 2017 Workshop of Computer Vision (WVC), Natal, Brazil, Brazil.

After the study, it comes to the conclusion that this implementation of the ASM, used this way, is not accurate enough to be used, negatively affecting the results. Better eye detection is needed to improve the performance of the methods. Applying illumination normalization methods has proven its value for the improvement of face recognition rates in unconstrained environments, although it is not possible to identify a method which satisﬁes every case. The results have shown that if the image information is restricted to the face, the performance gets worse, what leads to the conclusion that many works [10] [13] [5] [9] which do not crop the face are using background information to perform recognition. As in the dataset, the conditions of different samples are quite similar (background, clothes, size, haircut, beard, camera distance, etc.), the recognition systems end up using this information, improving the ﬁnal rates. The obtained results show that the SDRF (based on DCT) is not ready to be used yet, but it is still a system in development, so, it can improve later. One purposed improvement is selecting attributes of the analyzed images, in case of this work, normalized and cropped images, since these procedures remove noisy information. Improve the eye detection is a future work, being one of the following tests use the illumination normalization before the ASM algorithm, as well as experimenting LBP variations, parameters variation and new methods for histogram comparison.

Cheng, B., Wang, Z., Zhang, Z., Li, Z., Yang, D. L. J., Huang, S., & Huang, T. S. (2017). *Robust emotion recognition from low quality and low bit rate video A deep learning approach*. Paper presented at the 2017 Seventh International Conference on Affective Computing and Intelligent Interaction (ACII), San Antonio, TX, USA, USA.

This paper presents a novel framework for robust emotionrecognitionfromlowbitratevideo,anddemonstratesits promising performance as well as strong robustness to both pixel reduction and pixel quantization. There is apparent room for its further performance improvement. From the system perspective, we expect to incorporate more building blocks (e.g., the video encoding and decoding steps) into the joint optimization scheme, and make the pipeline in Figure 2 more end-to-end. From the model perspective, so far we have not utilized any temporal information for videobased recognition. The previous work [17], [18] exploited recurrent neural networks to capture the temporal coherence, and obtained additional performance gains. Since adjusting the temporal resolution (a.k.a., frame rate) [42] is also a common means to reduce video bit rates, our future work may also extend to adaptive temporal downsampling, followed by temporal-spatial joint video SR and recognition. Finally, as we observe that CC/CCC are evidently better evaluation metrics than RMSE, it is a noteworthy option to train our emotion recognition model under CC/CCC-based loss functions rather than the current MSE loss.

Metwally, A. H., Khalil, M. I., & Abbas, H. M. (2017). *Offline Arabic handwriting recognition using Hidden Markov Models and Post-Recognition Lexicon Matching*. Paper presented at the 2017 12th International Conference on Computer Engineering and Systems (ICCES), Cairo, Egypt, Egypt.

In this paper. An offline Arabic handwriting recognition system was proposed. New techniques regarding the preprocessing of the images; where diacritics are removed from the images to provide a clearer view for the HMM. Another technique was used to separate words into segmented letters for the training phase. Another contribution was provided in the means of the Post-Recognition Lexicon Matching algorithm, where the recognition rates are further improved by using lexicon matching along with primitive groups matching. Causing this system to reach very promising results compared to previous systems.

Parthasarathy, S., & Busso, C. (2017). *Predicting speaker recognition reliability by considering emotional content*. Paper presented at the 2017 Seventh International Conference on Affective Computing and Intelligent Interaction (ACII), San Antonio, TX, USA, USA.

This paper proposed to predict there liability of a speaker recognition task by considering the emotional content of the sentence. We presented a comprehensive analysis from 80 speakers to understand the performance of a speaker recognition system as a function of arousal and valence scores. We created a mismatch by training the speaker models with neutral speech and testing it with expressive speech. The analysis showed that emotional speech indeed affected the speaker recognition performance, especially for extreme values of arousal and valence. The analysis provided regions in the arousal-valence space for which we expect to have reliable speaker recognition results. This observation motivated us to train a speech emotion classiﬁer to identify sentences belonging to reliable, uncertain and unreliable classes. We formulated this problem as a three class problem, training our speech emotion classiﬁer to predict the reliability of a given sentence. The evaluation demonstrated that the DET curves and EER values are similar when the reliable, uncertain and unreliable classes are deﬁned either with ground truth emotional labels or with the predictions of our classiﬁer.

Pervin, M. T., Afroge, S., & Huq, A. (2017). *A Feature Fusion Based Optical Character Recognition of Bangla Characters Using Support Vector Machine*. Paper presented at the 2017 3rd International Conference on Electrical Information and Communication Technology (EICT), Khulna, Bangladesh, Bangladesh.

In this paper, the problem of Bangla optical character recognition has been addressed. Feature fusion technique has been addressed using Zoning and Gabor filter. Support Vector Machines are utilized for classification and recognition. From above works, it can be assumed that feature fusion based technique gives higher accuracy (92.99%) during recognition than individual ones (68.15% for Zoning, 89.73% for Gabor filter). Accuracy mostly depends on the preprocessing stage and feature extraction methods. By increasing efficiency of these phases, it might offer greater accuracy. However, some important directions for the future work may be to extend this work by incorporating modifiers along with handwritten Bangla characters, fusion of some more significant features using different fusion algorithms and try to implement other classification approaches on used dataset to evaluate comparative performance with proposed system.