



DYNAMIC FACE RECOGNITION AND TRACKING SYSTEM USING MACHINE LEARNING IN MATLAB AND BIGDATA

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Abstract- Face Recognition being one of the methods in identifying individuals is getting enhanced at a faster rate. This paper demonstrates the process of detection of faces of the individuals through a live monitoring camera using matlab and also aids in tracking them. The large amount of images being collected at each second is stored in big databases like Hadoop- databases(hbase) or Mongoddb as they are known for their higher processing speed. The facial features are extracted from all the images and are trained into the databases using machine learning algorithm. The tracking of individuals can be achieved by capturing their images while on the move and comparing them with the values stored in the databases. The detection of facial structure is done with Viola-Jones algorithm which though older is easy and efficient to use and Kanade-Lucas-Tomasi(KLT) algorithm is used for feature extraction . The HOG (Histogram of Oriented Gradients) features are extracted for training.

Index terms: Cascade object detector, Computer vision, Face detection, Face recognition, Big data, Neural networks.