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| **Research Paper Name** | **Features and problem area covered** |
| * AUTOMATIC RECOGNITION AND ANALYSIS OF HUMAN FACES AND FACIAL EXPRESSIONS | * **Representation of Face**   ( 2D intensity image and feature vector. Features in intensity images are hair intensity, size of eyes, distance between the eyes, distance between eyes and lips, etc.  Features in profile image are values obtained using a set of characteristic points on the profile, e.g. distance between nose and brows etc.)   * **Detection of Face in frames of image**   (Two Approaches used for detecting faces.  In the first approach, the face is determined as a whole unit, usually using model-based vision techniques.  In the second approach, a face is located by first locating some important features. Once the features are identified, the overall location of the face is determined using the geometric information.)   * **Identification of Face**   (Different Approaches used several matching schemes from one of the following:   1. Euclidean distance 2. Clustering 3. Set partitioning 4. Correlation)  * **Analysis of facial expressions**   (Describe Emotion using three dimensions.   1. AR (attention-rejection) 2. P-U (pleasantness unpleasantness) 3. Level of activation   Twenty spots in the face are identified and their movements are tracked in the sequence of video frames. They are then compared with the movements from the prototype patterns for different expressions to determine the face expression. |