Efficient Face Detection Method using Modified Hausdorff Distance Method with C4.5 Classifier and Canny Edge Detection

Abstract

With the rapid growth of population and technology, security problems become a major issue due to abnormal human behaviors. Recently researches have been motivated towards automatic human face detection from still image or from moving image. Present human face detection system leads computation inaccuracies i.e. higher degree of false negative rate. In this paper, a multilevel hybrid model has been proposed for face detection. In the proposed work, we initially use C4.5 classifier so that foreground and background images can be differentiated, as a result of which search space can be reduced. After that skin color model has been applied to detect the skin region which is followed by canny edge detection to detect the edges of skin region. In the last step, we use the Modified Hausdorff Distance Method which matches the pixel values and detects the faces with lower false negative rate.

References

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Index Terms

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Keywords

C4.5 Classifier, Modified Hausdorff Distance, YCgCr Color space model