

Computing Precision of SIFT and SURF Techniques Based on Gender Categorization

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Abstract: This paper contrasts the efficiency of Scale-Invariant Feature Transform (SIFT) and Speeded Up Robust Features (SURF). These methods will not be affected by modifications in scale, distortion, orientation, a shift in illumination and conversion. SURF is the same as SIFT quality but involves less time for computing.

Keywords: SIFT, SURF, Attribute extraction, and Gender detection

INTRODUCTION

Laptop technologies (e.g. machines can be used to discover information users such as gender to comprehend the relationship between person and machine structures) and can also enhance the efficiency of facial or facial expression identification technologies[1]–[4] used in tracking apps and to retrieve data for business activities (e.g. cameras can be used to compute the number of women and men arriving the shop. To consider the correct gender categorization, this proposed system uses face-to-face data such as emotional state, ethnic origin, gender, age and so on, and that humans can easily categorize human, male and female[5]–[8].

PROPOSED WORK

Figure 1 (A) shows the flowchart of the gender recognition scheme using the “SURF” algorithm[9]–[15], which comprises of the previous phases of the method in the first phase picture drawn from a repository with a volume of “250×250 “frames. The second phase is the key point identification here, where secure key points are taken out from the point of the picture, such as the level of reference, etc. In the third stage, the proposed system calculates the “SURF” descriptor using the face interest points. Using the “Hair Wavelet Response”, the proposed system acquires a “SURF” descriptor. The fourth stage is the extraction characteristic in which the essential features of the image are extracted. In the fifth stage, the proposed system uses the

“KNN algorithm”[16]–[19] for categorization, which separates datasets from the database to form a number of classes to determine. Figure 2 (B) shows the flowchart of the gender identification system using the “SIFT” [9], [11], [20]–[22] procedure that comprises of the stage of the process in the first stage picture taken from a databank with a size of “250×250” pixels.

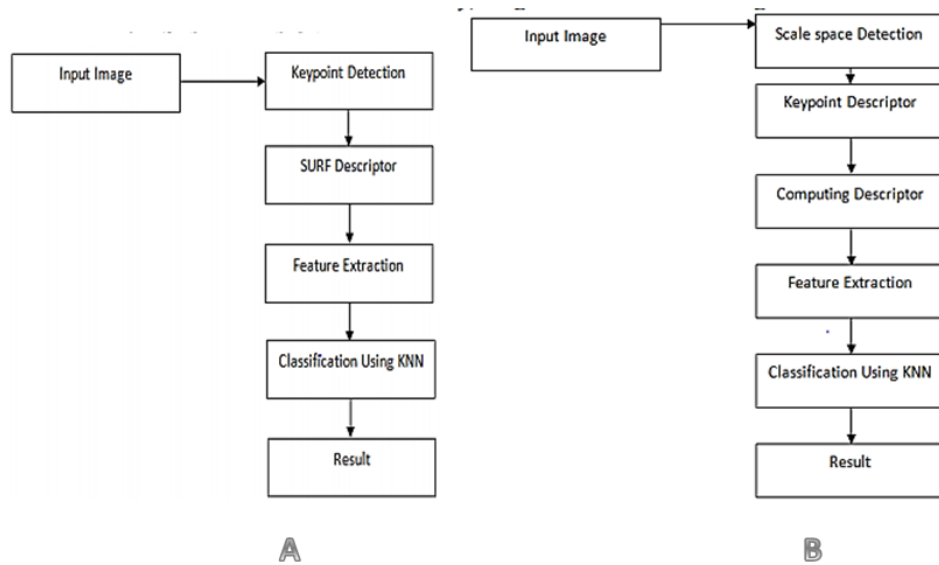


Figure 1 Framework of Proposed System

RESULTS

In Figure 2 the masculine picture is chosen from a repository with an image size of 250×250 frames. This is where the “SURF” dataset in (A) is used for gender detection and “SIFT” dataset in (B). The experiment conducted in this paper proves that the proposed system efficiently understands the male image(A) and female in (B) is selected.

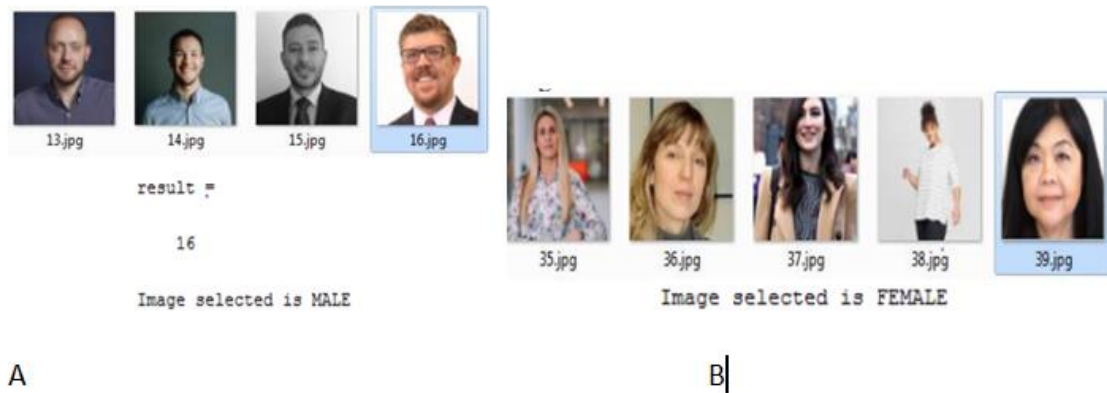


Figure 2 Outcome of Proposed system

CONCLUSION

This paper contrasted two techniques: “Scale-Invariant Transform (SIFT) and Speeded Up Robust Feature algorithm (SURF)”. SURF is the same as the SIFT, but it gives better accurateness. Gender recognition is superior used by SURF than by SIFT. Using SURF gender recognizing is 100 percent, but using SIFT woman identification is 100 percent, while masculine identification is less. SIFT implementation time is more than SURF.

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