

Image Clustering for the Features Characteristics Recognition and Detection in Stationary and Moving Sequence

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Abstract: As we all know that object recognition is an interesting area of research and always an important issue in computer vision. A lot of researches are going on since last two decades. In large data image data processing is one of the challenging tasks for the identification and analysis of the image. The images which are acquisitive in different conditions are having high and low resolution and it requires image pre-synthesis and post synthesis for the analysis and image detection. The images of the object is now changing with various object expressions in an object condition, which is same for the image monitoring and image realization, with the help of the various techniques and processing. The objective of the image convolution to get the image in the binary digital conversion for the image segmentation and image recognition for the various industrial applications. This is the reflective object for the large data analysis in image processing for the security purpose. In this paper the author tried to put the concept of clustering of the image for retrieving the exact image features after synthesis for various objective features.

Keywords: Image, Synthesis, Detection, Features, Identification, Accuracy.

Introduction

Image which are stored with the help of the various technical instrument need to pre synthesis for maintaining the quality of the image. As the Acquisition of the image [3] which we are taking in various type of resolution need to check. The resolution plays a vital role for the objective of the image synthesis for the post and pre image clustering [2]. The images of the object which may be living object or non-living object require the corner bounding for the detection of the image. The basic features of the human image [6] requires image acquisition to be fast and responsive so that the ratio error has to be minimum and accuracy should be high. Once the accuracy is high the image post synthesis is faster and reflective. Human identification is requiring the basic features which are to be selected for the identification [2] and detection of the body. The basic features [13] of the body like eyes, nose, mouth, iris, and fingerprint are mostly used for identification and detection. The face object recognition [1] is the widely and adaptive techniques used by various method for the image recognition and detection [5].

Object Clustering and Feature characteristics

The images which are required stored in the device for data extraction [1] and recognition for the purpose of image synthesis require the image identification in the stationary object position or moving object position. Both object positions are requiring to acquisitive the image [5] in such a way that identification of the object is faster and progressive.

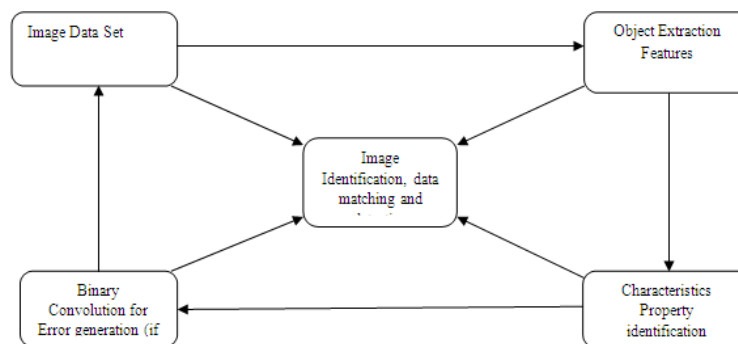


Figure 1: Image Clustering

Image basic characteristics [10] are to extract the basic feature for identification and segmentation of the same with the help of convolution. The image base with the human object of face [4-9] is characterized based on the face features values and the same will be divided in binary representation. The basic block diagram for the image clustering is shown in the figure1. The face image [7-12] for identification and detection [15] use the characteristics for the image convolution.

Image Synthesis

Image synthesis for the object which is having the facial features [10-17] based recognition need to be elemental in the convolution form, for the identification of the object, in the binary and segmented form of matrix. The basic face [16] features require to be identified for the pre-processing. Face features [8] is to be recognized for the single object and multi-object, based on the bounding of conditions for the total boundaries of object. The face has more a kind of circular shape for the features extraction and its comparison with the set data matrix for the stationary and moving object-like video. The face features of the characteristics are to be checked with the data base and find to be Fit with maximum accuracy band than Image Fit to Successful (IFTS), otherwise if it fails to detect , will reflect as Image Fit to Fail (IFTF). The basic features block to be segmented and presented is shown in figure 2.

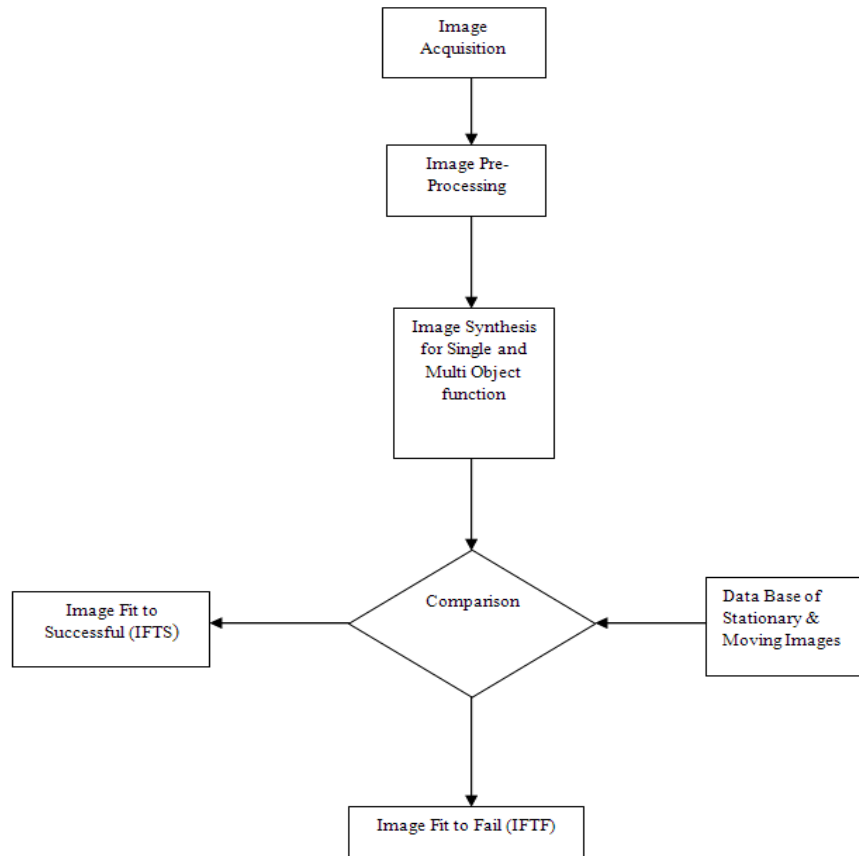


Figure 2: Image Synthesis

Image Quality Analysis

Clustering of the image which needs to be synthesized again has to be verified for the quality checking of the image and its feature extraction. The features which need to be identified and detected for various application in security

system [14] and modern applications, the characteristics quality has to be checked. The face features [4] extraction of the quality of the image is required for the accuracy and reliability. The extracted and segmented image of the object should have minimum error for more accuracy. The technological development for feature extraction of the face [11] and other objects need to be checked for quality and frame technology. Image Quality projectors for stationary image features for single object and multi object are shown in table-1 and table-2 respectively.

Table-1: Image Quality Analysis-Stationary Image-Single Object

Extraction and detection Property	Single Object-Stationary			
	Feature-1	Feature-2	Feature-3	Feature-4
Object	Mouth	Eye	Nose	Fingerprint
Technological system	Responsive	Reflective	Responsive	Very reflective
Adaptability	More	high	Most	Very high
Collectability & Reliability	Fast & More	Fast & High	Medium	Fast & Very high
Error	Lower	Lowest	Lower	Lowest
Accuracy	High	Highest	Moderate	Highest

Table-2 Image Quality Analysis- Stationary Image-Multi Object

Extraction and detection Property	Multi-Object-Stationary			
	Feature-1	Feature-2	Feature-3	Feature-4
Objects	Mouths	Eyes	Noses	Fingerprints
Technological system	Responsive	Reflective & cognitive	Responsive	Very reflective
Adaptability	More	Excellent	Most	Very high
Collectability & Reliability	Fast & Moderate	Fast & High	Medium	Very high
Error	Lower	Lowest	Lower	Lowest
Accuracy	High	Highest	Moderate	Highest

The image quality which is reflected for the single object and multi-object in the moving image is required for the object detection and its accuracy feature in the image acquisition and its matching. The error generated in the matching of object to be reduced and framed for the reliability of the system. The Image Quality analysis for moving image single object and moving image multi object is shown in table-3 and table-4 respectively.

Table-3 Image Quality Analysis-Moving Image-Single Object

Extraction and detection Property	Single Object-Moving			
	Feature-1	Feature-2	Feature-3	Feature-4
Object	Mouth	Eye	Nose	Fingerprint
Technological system	Responsive and Reflective	Reflective and Fast Response	Responsive	Fast & Highly Responsive
Adaptability	More	high	Most	Very high
Collectability & Reliability	Fast & More	Very Fast and High	Medium	Very high & Prompt
Error	Lower	Lowest	Lower	Lowest
Accuracy	High and Error free	Highest and Approximate	Medium	Highest and Approximate

		NIL Error		NIL Error
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Table-4 Image Quality Analysis- Moving Image-Multi Object

Extraction and detection Property	Multi-Object-Moving			
	Feature-1	Feature-2	Feature-3	Feature-4
Objects	Mouths	Eyes	Noses	Fingerprints
Technological system	Responsive	Reflective & cognitive	Responsive	Very reflective
Adaptability	More	Excellent	Most	Very high
Collectability & Reliability	Fast & Moderate	High	Medium	Very high
Error	Lower	Lowest	Lower	Lowest
Accuracy	High	Highest and Approximate NIL Error	Medium	Highest and Approximate NIL Error

From the above table, it will reflect that the same feature of the objects needs to be extracted and checked for the various platforms for the single objects and multi-object. The image detection of the face s very prompts for the detection of human in various application platforms. Accuracy in each technology promptly checked for the image or face recognition and its match. Features in different expression also play a vital role for the of the faces matching and detection.

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Conclusion

Face image is the major portion for identification and detection of the various features. The extracted features are to be collected very fast and responsive system to capture in the moving and stationary conditions. This need be monitored every time for object quality and accuracy. The features which are having the characteristics of adaptability and reliability need to be upgraded with modern techniques and various methods regularly. The error in the face recognition and detection has to be minimum as much as possible. It can be applicable in various applications like car parking, vehicle tracking, and surveillance operation like CCTV in public places. In future we can use this analysis for robust and reliable object recognition in large data.

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