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A SURVEY ON IMAGE CLASSIFICATION USING DATA MINING TECHNIQUES

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Abstract: Data mining is the growing field of research that has been attracting many types of research to a piece of information from the dataset. In both data mining and image, analysis area is taken from an image. The main aim of the image classification is to classify the various classes of their visual characteristics. Human-computer interaction, the computer vision system is an essential role in our lives. The areas of computer vision application include gender detection, face recognition, body tracking, and ethnicity identification etc. A classification technique like decision trees, support vector machine, nearest neighbor and neural network etc.

Keywords :Classification, Feature Extraction, Image Mining, Image Datasets, Knowledge Discovery, Pre-processing.

I.INTRODUCTION

Knowledge discovery in databases in the non-trivial process of identifying valid, novel potentially, useful and ultimately understandable patterns in data. Many companies, organization, and research projects collect massive amounts of data. A huge amount of data is collected daily transactional data, customer data, additional data (network local and fault).
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Machine Learning is a science of problem-solving information handling. Machine Learning is used to automate the process of data mining. Machine learning, a branch of artificial intelligence, concerns the construction and study of systems that can learn from data.

The major issues in data mining are the mining of different kinds of knowledge in databases. Interactive mining of knowledge at multiple levels of abstraction. Incorporation of domain knowledge. Mining methodology and user interaction issue performances issues relating to the diversity of database types.

The objective of image classification is to identify the feature occurrence in an image. The image classification is to classify the various classes of their visual characteristics include color, texture, and shape etc. Visualization helps to view and analyze general trends and discrepancies. Classification is a supervised learning. We have feature extract process and to generate the features to be the selection and classification tasks. For the classification task provided the number of features reduces and feature selection.

II .LITERATURE REVIEW

Santosh Kumar Dash and Mrutyunjaya Panda, image classification using data mining techniques [1]. Here the image dataset used for cancer image, satellite image, and scenery image. They have taken Naive Bays, J48 and Random forests algorithm. They reported a 90 per cent classification accuracy on Random forests algorithm for cancer image.
Vyoma Patel and G.J.Sahani, [2] image classification to identify the feature occurred in an image. In this paper methodology used for feature extraction, feature local histogram (FLH) mining.
Muhammad Naeem Ahmed Khan, Sheraz Ahmed Qureshi and Naveed Riaz, [3] Discused on gender classification with a decision tree. Here, to classify the images based on gender into one of the categories of male or female. They use the colour segmentation technique to identify the colour of the skin and body. In this paper Classification techniques like a decision tree, support vector machine, nearest neighbor, neural network etc used.

Wajid Aziz, Zaki H.Kazmi, and Imtiaz A.Awan, [4] the author discuss the classification of a human face and non-faces using machine learning techniques. In this paper the methodology used for pre-processing, feature extraction methods, classification. To classify face and non-face using machine learning techniques. We have to pre-process the

data after that feature extraction is better classification performance.

Dr.S.Vihayarani and Mrs M. Vinupriya [5] the author discusses on Facial image classification and searching. In this paper, they use different approaches in face recognition. In the image-based face recognition are various categorized knowledge-based methods, feature invariant approaches, template matching methods and appearance based methods.

Jiwen Lu. Member, IEEE, Gang Wang, [6] This paper discusses Human identity and Gender recognition from gait sequences with arbitrary walking directions. They took a sparse reconstruction based metric learning (SRML). If they are various categorized used view-invariant gait recognition, gait-based gender classification, and metric learning.

Thamilselvan, Dr.J.G.R.Sathiaseelan [7] image classification using hybrid data mining. To find the valuable information form huge dataset is cancer image, face image, retinal image, iris plant etc. In this paper they take comparison of accuracy analysis of hybrid techniques. They taken the algorithms are GA-SVM, EKM-EELM, NB-SVM, SVM-CART, and DT-NB.

Duan Xiao-Dang1,2, Wang Cun-ruil,[8] Ethnic Features Extraction And Recognition Of Human Faces. To extract the two features from the dataset geometric feature and algebraic feature. We have taken image pre-processing, then algebraic features extraction based on LDA algorithm.

Tsung-Wei Ke, Stella x.yu, David Whitney [9] Mooney Face Classification and Prediction by Learning across Tone. We have the grayscale face classifier, mooney face classifier, photo-to-mooney data processing, large-scale mooney face dataset.

Shicheng Yang, Ying Wen[10] A Novel SRC Based Method For Face Recognition With Low Quality. Sparse representation-based classification method used for face recognition with low image quality and then we apply the low-rank component to the training set.

III.CONCLUSION

Data mining is the growing field of research that had attracted many types of research to a piece of information from the dataset. To classify the human face and to find which origin they are belongs. For analysis, the image areas are taken from an image. The main concept of the image classification is to classify the various classes of their visual characteristics. To identify the origin of still image and to classify that image. Color identifies based techniques are used to identify the color of the skin. To analyze the image that to pre-processing the data after that feature extraction is provide better classification performance.

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