implementation of MACHINE LEARNING

model

for

image classification

INTRODUCTION:

With the increase in the data shared in the present world Image classification has become task for the data managers.

The ability to segregate the images has become an efficient tool in numerous industries such as Healthcare and Security Systems.

Image classification involves in assigning a marking to an image based on the content it possesses.

With the growing importance to the visual data there is an need for the efficient machine learning model for the accurate identification.

Given the diversities in the visual data of the world developing a model which is accurate is a tiring challenge.

The tasks described above maybe implemented using the Computer Vision and Facial Recognition

GOALS:

The main agenda and goal of the project is to create a machine learning model based on the Neural Networks that can classify images into various categories.

The model should be trained on various datasets and also should be checked to handle image of various sizes, quality and surrounding conditions such as Light.

Image classification marks a **supervised learning** challenge for algorithms.

* The main goal of this process is to acquire and train the data on huge collections of data as it helps in accurate classification of the data and categorize the visual data.
* Making sure about the performance of the model and optimisations it may have to improve the versatile nature of the model to adapt and perform well
* The model works on a specified number of Training set images through which it understands the classifications and makes decisions. Deploying the model is encountered with tricky images.
* The main and most important goal is to ensure that the model can handle large datasets and works efficiently when new data is added.

MOTIVATION:

The main motivation in developing this Machine Learning model is to automate the tasks as a result a lot of time may be saved and used valuably.

Huge amounts of data can be handled easily using these models and valuable information can be extracted quickly and managed in safe way.

This can reduce the human intervention and also reduces the simple mistakes that are encountered.

These models can enhance user experience and provide a hassle-free solution to organization of the data and allows the user to maintain data in a personalised manner.

Any kind of anomalies and hazards can be detected prior and help leading a safe life

The model can be scaled easily and be used multiple situations after training the model properly.

Models can easily categorise the data as it is exposed to wide range of images in training and testing.

Objectives:

* Gather a dataset of images representing different categories. Preprocess the images to prepare them for model training.
* Design a Neural networking architecture capable of learning visual features from the images to classify them into the correct categories
* Training the model on wide range of data and testing its accuracy may help in improving the accuracy and precision

The expected outcome is a simple and efficient image classification model capable of achieving high accuracy on a variety of test images and handle real life data by reducing the work load.