

An API is mainly used for interacting with the database through different HTTP requests, such as HTTP GET, HTTP POST, HTTP delete and HTTP update. In the case of processing images, APIs are very helpful, and they have a very important role for storing a tremendous number of images that need to be processed later through an algorithm such as segmentation, geometric transformations and K-means Algorithms.

First, segmentation algorithm is used for splitting an image into multiple layers by separating each layer so that it can be simplified for a better analysis

Second, geometric transformations are used for positioning and replacing shapes which sometimes helps in segmentation algorithms to provide a better analysis.

Finally, K-means algorithm's goal is to group similar data points together into a predefined number of clusters. You can determine data points are similar by looking at how far apart they are. If two data points are closer, you can tell they are similar and if two data points are farther apart then it's less similar. Once the distance between each data point and a centroid is calculated you assign it to a cluster. K-means involves centroids and makes use of them. Centroids means the cluster center. The number of centroids that are made correspond to the number of clusters that will be made. Centroid is a representation of the cluster's center.