**SMART IRRIGATION CONTROL WITH IMAGE PROCESSING**

**ABSTRACT**

Our paper proposes an approach for the classification of leaf disease, based on the characterization of texture, shape, and color properties. An original plant leaf is preprocessed initially using the Gaussian filter to minimize the noise. For enhancing the contrast and quality of the image, the histogram equalization applied. The preprocessed image is segmented by K-means clustering; only affected region is picked and their features are extracted. The LBP systems are introduced for the extraction of features. It has the issues of lower accuracy and recognition rate. The proposed feature extraction techniques overcome the difficulties faced by the existing method. The feature comprises of texture features, shape features, and color features. Then, classification algorithm is applied over the segmented image in order to predict and classify the disease. Atlast, it compared with training images in relevant to show the performance assessment of the proposed approach. Based on disease classification, pesticides will be providing to plant leaf.

**OBJECTIVE:**

* To predict the type of leaf disease and classify them to its relevant class.
* To increase the detection and classification accuracy.
* To provide the pesticides to plant leaf based on leaf disease.