# download.jpgB. Tech Final Year Major Project (2015 Batch)

**Department of Electronics and Communication Engineering**

**Vardhaman College of Engineering (Autonomous)**

**Shamshabad, Hyderabad - 501218**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Student 1:** | K.Vaishnavi | 15881A04L2 | | **Supervisor:** | Dr.M.Narayana |
| **Student 2:**  **Student 3:** | S.Amith Sai  M.Sai Krishna | 15881A04P1  15881A04N9 | | **Designation:** | Professor |
|  |  | |  |  |  |

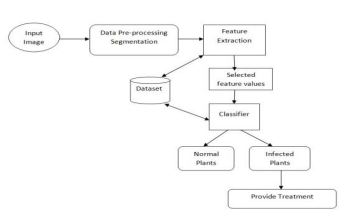
**PROJECT DOMAIN: SIGNAL PROCESSING & COMMUNICATIONS**

**Title of the Mini Project:**

**Plant Disease Detection using Digital Image Processing**

**ABSTRACT:**

India is a farming nation. Indian economy is highly dependent of agricultural productivity. Therefore in field of agriculture, detection of diseases in plants plays an important role. The existing method for plant disease detection is simply naked eye observation by experts through which identification and detection of plant diseases is done. For doing so, a large team of experts as well as continuous monitoring of plant is required, which costs very high when we do with large farms. In such conditions, the Image Processing technique proves to be beneficial in monitoring large fields of crops. Automatic detection of the diseases by just seeing the symptoms on the plant leaves makes it easier as well as cheaper. This also supports machine vision to provide image based automatic process control, inspection, and robot guidance. In plants, some general diseases seen are brown and yellow spots, early and late scorch, and others are fungal, viral and bacterial diseases. Image processing is used for measuring affected area of disease and to determine the difference in the color of the affected area. The traditional methods of disease detection were inaccurate and not effective. The traditional methods fail to detect the diseased part of leaf in initial stages to overcome that and to get high yield in agriculture we use plant disease detection using digital image processing. So various researches in this field lead to inclusion of image processing for accurate detection of disease by using plant leaf. Various spots, patterns on plant leaf are useful in detecting the disease. At the same time, in India, farmers do not have proper facilities or even idea that they can contact to experts. Due to which consulting experts even cost high as well as time consuming too. In such conditions, the Image Processing technique proves to be beneficial in monitoring large fields of crops. Automatic detection of the diseases by just seeing the symptoms on the plant leaves makes it easier as well as cheaper. Digital image processing is the methodology to achieve fast and accurate result about the plant leaf diseases. It improves agricultural productivity by detecting the appropriate diseases. For diseases detection, image of an infected leaf should be examined through the set of procedures. Input image should be pre-processed, and then its features should be extracted according to the dataset. Then some classifier techniques should be used to classify the diseases according to the specific data set. It also covers survey on different disease classification techniques that can be used for plant leaf disease detection. Image segmentation is an important aspect for disease detection in a plant leaf.



**KEYWORDS:** Image Acquisition, Plant Diseases, Pre-processing, Segmentation, Feature Extraction.

**REFERENCES:-** [1] Pranjali Vinayak Keskar, Shubhangi Nimba Masare, Manjusha Suresh Kadam and Prof. Mrs. Seema U.Deoghare,” Leaf Disease Detection and Diagnosis”, International Journal of Emerging Trends in Electrical and Electronics (IJETEE) Vol. 2, Issue. 2, April-2013.

[2]. Sachin .D.Khirade, A.B.patil,” Plant disease detection Using image processing,”2015, International conference on computing communication control and automation, IEEE.

[3]. Vijai singh, Varsha, A.K.Mishra,”Detection of unhealthy region of plant leaves using image processing and genetic algorithm”, 205, ICACEA, India.