### V.S.B.ENGINEERING COLLEGE, KARUR

## **Department of Computer Science and Engineering**

# **IBM NALAIYA THIRAN**

### LITERATURE SURVEY

TITLE : Fertilizers Recommendation System For Disease Prediction

**TECHNOLOGY** : Artificial Intelligence

**DOMAIN NAME** : Rural & Agriculture Development

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ABSTRACT : Agriculture is the most important sector in today's life. Most of the plants are affected by a wide variety of bacterial and fungal diseases. Diseases on plants placed a major constraint on the production and major threat to food security. Hence, early and accurate identification of plant diseases are essential to ensure high quantity and best quality. In recent years, the number of diseases on plants and degree of harm caused has increased due to the variation in pathogen varieties, changes in cultivation methods and inadequate plant protection techniques.

An automated system is introduced to identify different diseases on plants by checking the symptoms shown on the leaves of the plant. Deep learning techniques are used to identify the diseases and suggest the precautions that can be taken for those diseases.

**INTRODUCTION**: Detection and recognition of plant diseases using artificial intelligence are very efficient in providing symptoms of identifying diseases at its beginning stage or earliest stage. But in recent days, the field was going down due to various natural calamities. In order to overcome the problem, various issues in this field need to be addressed. The soil type, fertilizer recommendation, diseases in plants and leaves. All these features need to be considered. Plant pathologists can analyze the digital images using digital image processing for diagnosis of plant diseases. Application of computer vision and image processing strategies simply assist farmers in all of the regions of agriculture. Generally, the plant diseases are caused by the abnormal physiological functionalities of plants. Therefore, the characteristic symptoms are generated

based on the differentiation between normal physiological functionalities and abnormal physiological functionalities of the plants. Mostly, the plant leaf diseases are caused by Pathogens which are positioned on the stems of the plants. These different symptoms and diseases of leaves are predicted by different methods in image processing. These different methods include different fundamental processes like segmentation, feature extraction and classification and so on. Mostly, the prediction and diagnosis of leaf diseases are depending on the segmentation such as segmenting the healthy tissues from diseased tissues of leaves.

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