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ANALYSIS THE DISEASE AFFECTED PLANTS BY USING VARIOUS TRANSFORMATIONS

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ABSTRACT

Identifying the disease affected plant in earlier stages itself which gives more benefits to farmers as well as people who involved in agriculture sector likewise to improve those sector this system mainly deals with the disease affected plants and the image taken as input and feature extraction take place along with this various transformation like Laplace transform, Z-Transform, Fourier Transform applied to those data and compare among those transforms and find out the best transform for the given input images and the implementation mainly deals with the parameters like FAR, FRR, Time.

Keywords: Laplace Transform, Z- Transform, Fourier Transform, Edge, Shape

INTRODUCTION

To identifying the disease affected plants as soon as possible which leads to more profit in the agriculture sector to gain more profit this system mainly involve in the feature extraction and that is very much useful to identify the disease affected data earlier itself and that to feature extraction like color, shape and edge taken into account for the entire system shown in **Figure 1**.

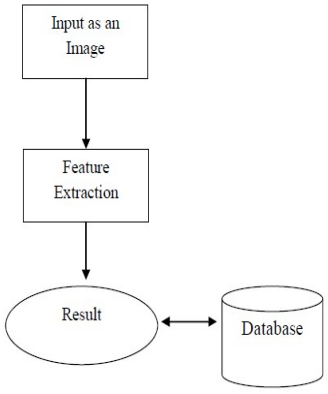

Figure 1: Feature extraction

After feature extraction take place like color, shape and edge this system mainly focus on algorithm like Laplace Transform, Z-Transform, Fourier Transform compare among those transforms which mainly give efficient transform in earlier stage itself and FAR, FRR, time are taken into the account for the entire process **[1-3]**.

MATERIALS AND METHODS

This system mainly designed for the earlier detection of disease and forecast the disease is the major work of the system in order to give more accuracy this system deals with 3 major transform like Laplace Transform, Z-Transform, Fourier Transform and parameter like Time, FAR, FRR are also consider for the justification of the result **[3-5]**.

The **Figure 3 & Figure 4** shows the normal and abnormal image as well as edge detected image shown from the feature extraction these can be done by using this system **[6]**.

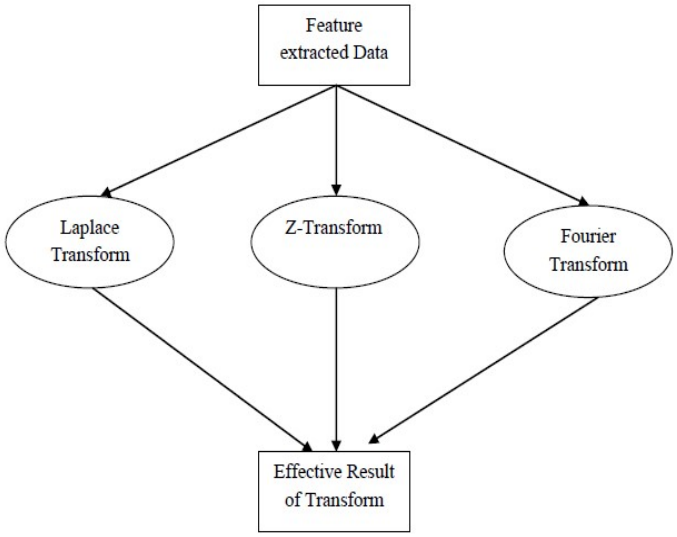

Figure 2: Various Transformation Details

Figure 3: Shows the Normal Image and Edge Detected Image

Figure 4: Shows the Abnormal Image and Edge Detected Image

Table 1: Comparison of Laplace Transform

S. No	Parameter	Normal	Abnormal
1	Time (s)	0.01	0.01
2	FAR (%)	100	99.01
3	FRR (%)	99.01	99.01

Table 2: Comparison of Z-Transform

S. No	Parameter	Normal	Abnormal
1	Time (s)	0.01	0.01
2	FAR (%)	99.01	99.01
3	FRR (%)	99.01	98.01

Table 3: Comparison of Fourier Transform

S. No	Parameter	Normal	Abnormal
1	Time (s)	0.01	0.01
2	FAR (%)	100	100
3	FRR (%)	99.01	100

RESULTS

The Implementation result shows separately tables for Laplace transform, Z-transform and Fourier Transform shown in **Table 1, Table 2 and Table 3**. The **Table 1** shows the Laplace transform which has the parameter of Time, FAR and FRR for both normal as well as abnormal images totally 101 images

taken into account for both normal images as well as abnormal images. Similarly the **Table 2 and Table 3** shows the remaining transformation with parameter and images are same from the implementation Fourier transform is suitable to earlier detection is effective and efficient transformation **[5]**.

CONCLUSION

This system mainly focus on earlier detection of disease infected plant through mainly 3 major transforms like Laplace Transform, Z-Transform, Fourier Transform by using feature extraction takes place and by analysis those data parameter for analysis Time, FAR, FRR are taken into account finally in the implementation side Fourier transform is the best and suitable for the earlier detection compare among the remaining transformation.

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