



## Identification of Iritis disease affected iris using discrete Transforms

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### ABSTRACT

Even though Technology development is huge and high remedy for disease and early detection is a major challenge in present day especially like disease affected iris which affects the day today routine. In order to give support to that sector this system will identify the disease affected iris in earlier stage itself to give remedy and earlier treatment to the patient. The database collected for this system totally 109 images used with and without contact lens to identification. Eye image will be processed and that image will be converted to circular form to polar form and then feature will be extracted and match with database using discrete transforms namely Fourier Transform, Discrete Fourier Transform, Z-Transform using these transforms earlier detection can be made and for result justification FAR, FRR and Accuracy will be taken into account for the entire process.

**Keywords:** Z-Transform, Fourier Transform, Discrete Fourier Transform.

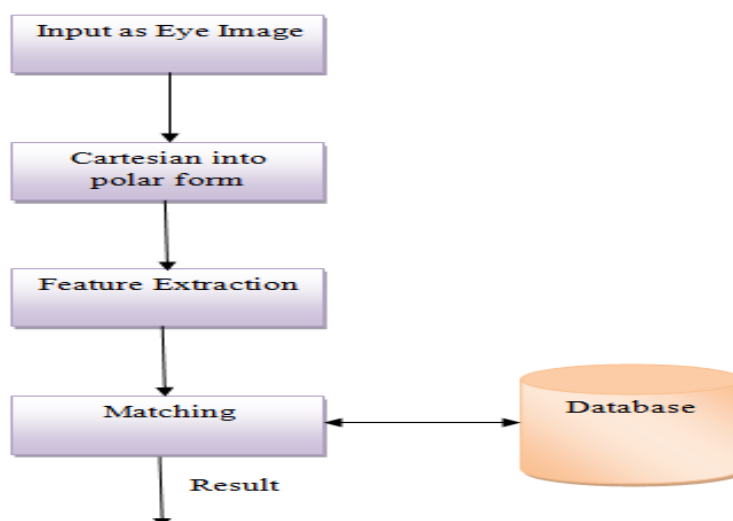
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### INTRODUCTION

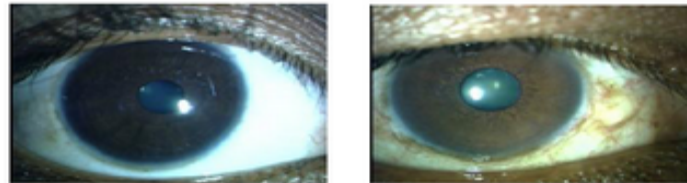
The early detection of disease affected iris is still a difficult task in medical industry especially this system deals with iritis disease in iris. The disease affected iris will be taken and then Cartesian form to polar form should be converted that to early detection is very difficult to give solution to this problem. Feature extraction takes a major role for the identification like shape color and edge will be taken into account [1].



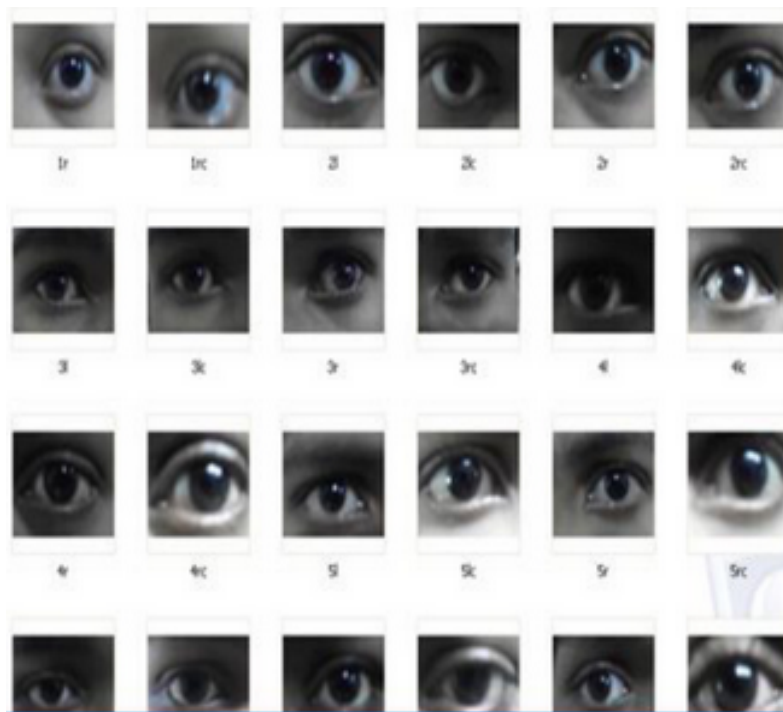
**Figure 1: Process of the System**

**MATERIAL AND METHODS**

The Iritis disease affected image sample shown in figure2 and followed with figure3 shows about with and without contact lens image for database to process the system and to calculate the performance by using the discrete transforms namely Z-Transform, Fourier Transform, Discrete Fourier Transform for early detection of Iritis disease affected iris. Once the system converted the Cartesian form into polar form feature like color, edge and shape will be taken and then again using the above transform easily find out the efficient of the transforms [3][4][6].



**Figure 2: Iritis affected Eye sample image**



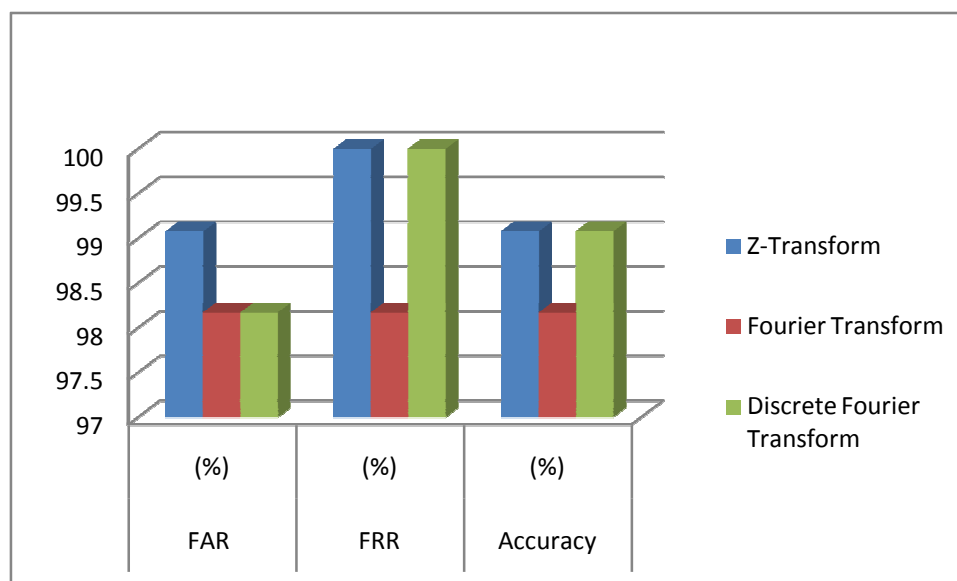
**Figure 3: With and Without Contact lens sample image**

**RESULT**

The implementation of this system mainly deals with FAR, FRR and accuracy are the important parameter to find out the best result. The Table 1 shows the comparison among the implemented transforms [2][5].

**TABLE 1: COMPARISON AMONG TRANSFORMS**

S.No	Transforms	FAR (%)	FRR (%)	Accuracy (%)
1.	Z-Transform	99.08	100	99.08
2.	Fourier Transform	98.17	98.17	98.17
3.	Discrete Fourier Transform	98.17	100	99.08



**Figure 4: Variation in FAR, FRR and Accuracy**

## CONCLUSION

The identification of iritis disease affected iris in earlier stage can be made simple by using the above process especially using the Z-transform early detection of iritis affected iris can be found the implementation parameter justify the result and effectiveness of the process can be made and database creation made own from the hospital for both with and without contact lens as well as iritis disease affected image for the entire process.

## CONFLICT OF INTEREST

Declare no conflict of interest.

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