Ex.no:
Date

fuzzy logic - [illegible]

Aim:

The aim of implementing fuzzy logic for edge detection is to enhance the robustness and accuracy of edge detection in images by handling uncertainities in pixel intensity transaction.

Procedure for fuzzy logic edge detection:

Step-1: set up the environment

1. open Matlab: ensure you have access to Matlab with the image processing toolbox & fuzzy logic toolbox installed.

Step-2: Import and convert image to Grayscale.

1. Read the RGB Image
2. convert to Grayscale.

Step-3: convert image to doble - precision data.

1. convert double.

Step-4: obtain image gradient

1. Define Gradient filters.
2. calculate Gradients
3. plot image gradients

Step - 5: Define fuzzy inference system (FIS) for edge detection

1. create FIS
2. Add inputs
3. Define Membership function for input
4. add output
5. Define Membership function for output
6. plot Membership function

Step-6: Specify FIS rules.

1. add rules for FIS

Step-7: Evaluate FIS.

1. Evaluate edge detection

Step-8: plot results

1. plot Original Grayscale Image.
2. plot detected edges.

O/P:

Result:

The program was successfully executed and the o/p is verified.