**CHRIST (Deemed to be University)**

**Department of Computer Science**

**MAI 373 / Computer Vision**

**Class: III M.Sc (AI & ML)-2023-2024**

**ESE – II**

**DATE: 18-04-2024 Time: 2.00 To 4.00 PM Max Marks:30**

**SET –II**

1. i) Implement Mid-point filter after including the appropriate density of Gaussian noise in the image and analyse the performance of the filter by increasing the noise level.

ii) Apply Alpha-trimmed filters after including salt & pepper and Gaussian noise. (After implementing alpha-trimmed filter change the d value as 0 and mn-1 and write your inference).

2. i) Find the gradient of the attached image in each direction (horizontal Gx and vertical Gy) using Sobel, Prewitt and Robert approximation methods and display the horizontal, vertical and combined edges.

1. Interpret the results of the above three methods and justify how magnitude of gradient operator is used to detect the edges.

**Submission guidelines**

Submit PDF and ipynb file

The file name should be RegNo\_ESE-2

**Evaluation Rubrics**

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1. Correctness of Code (Writing of Code)

a. Program 1 – 5 Marks

b. Program 2 – 5 Marks

2. Implementation (Built-in/User defined function)-8

3. Visualization of results – 7 Marks

4.. Interpretation (VIVA)– 5 Marks