

Answer according to Question No 2

04190301280
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(b) The key stages of image processing are:

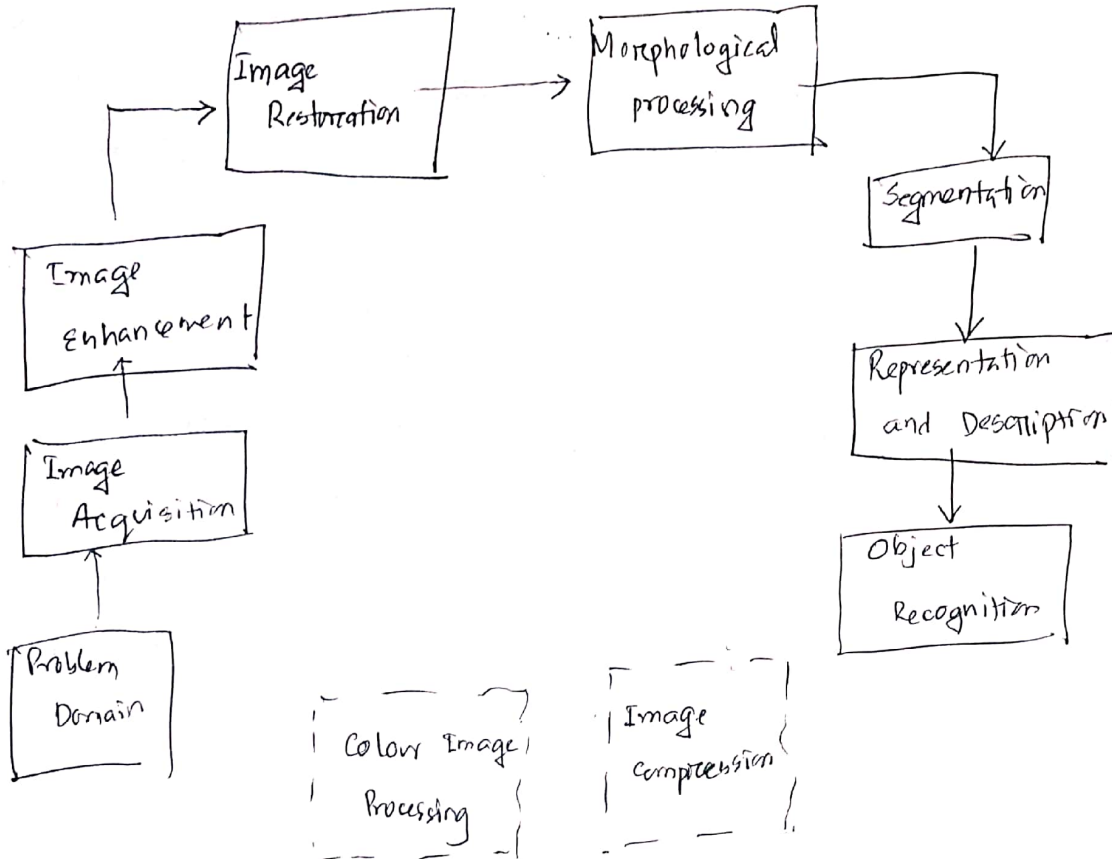


Image acquisition: It is action of retrieving image from an external source for further processing.

Image enhancement: It is to process of encoding or converting an image file in such a way that it consumes less space than original file.

Image Restoration: It is to operation of taking a noisy image and estimating the clean, original image. Corruption may come in many forms as motion blur, noise and other common imperfections.

Morphological Processing: It is a collection of non-linear operations related to shape or morphology of features of an image. Morphological operations can be applied to grey scale image such that their light transmission function are unknown and therefore their absolute pixel values are of no. or minor interest.

im No. 3

gital Image Processing are restriction

ing

Image Segmentation: It is the division of an image into regions or categories, which correspond to different objects or parts of object. Each pixel in an image is allocated to one of a no. of these categories.

Image Representation and description is critical for successful detection and recognition of objects in a scene.

ng. Bit-plane slicing isolates values and can highlight

image.

136
250
189
175
160

To highest value is 252

It is

$$2^8 = 256$$

Object Recognition: It is technique of identifying the object present in image and videos. It is one of the most important applications of machine learning and deep learning.

Image: Image is an array, or a matrix, of square matrix elements (picture elements) arranged in columns and rows.

2.0) 2 2 2 2 4 7 7 7 8 8 9 9 1 1 1 1 1 4

No. of 2s = 4

No. of 9s = 2

No. of 4s = 2

No. of 1s = 5

No. of 7s = 3

No. of 8s = 2

$$\text{size} = 4 + 2 + 3 + 2 + 2 + 5 = 18$$

resulting ³ ⁴ bits

~~00100~~ ~~0010~~ 0011 0010 0010

~~0011~~ 0010 011 010 010 101
0100

result: 100 010 011 010 010 101 = 18

2a)

4
7 3 7
8 4 2 4 8
4 2 1 2 4 7
7 2 1 0 1 2 3 4
4 3 2 1 0 1 2 3 4
7 4 2 1 2 4 7
8 4 2 4 8
7 3 7
4

This is city block distance of 4

0	0	0	0	0	0	0	0	0
0	1	1	1	1	1	1	1	0
0	1	1	1	1	1	1	1	0
0	1	1	1	1	1	1	1	0
0	1	1	1	1	1	1	1	0
0	1	1	1	1	1	1	1	0
0	1	1	1	1	1	1	1	0
0	1	1	1	1	1	1	1	0
0	1	1	1	1	1	1	1	0
0	0	0	0	0	0	0	0	0

class board distance of

$$d = 8$$

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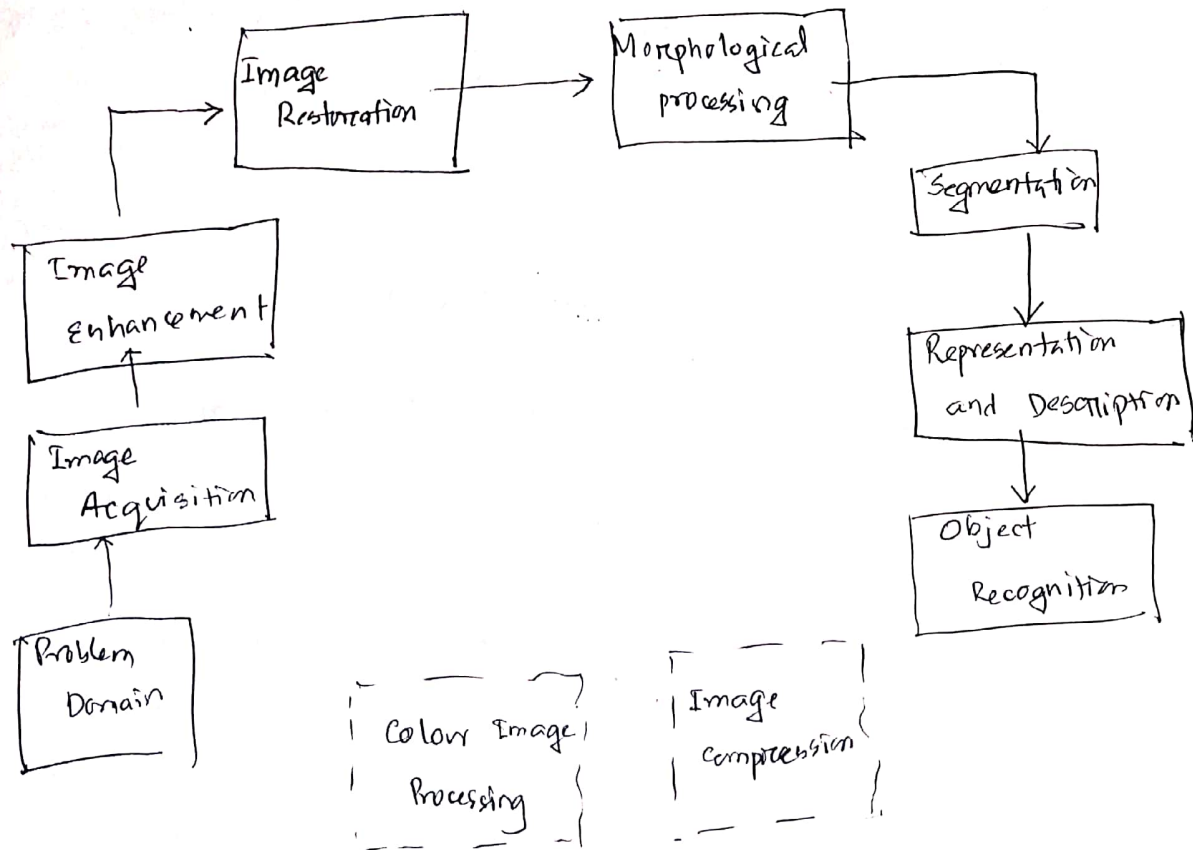


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