CSI 4133
Lab 1

uOttawa

Contents

Introduce students to methods

- ***Display Image***
- ***Down-sample Image - resize image***
- ***Quantize Image*** **- scale image contents**

Part A: Display Image

- **Read an image**
  - **cv2.imread(arg1, arg2)**
    - arg1 - path of image
    - arg2 - the flag which specifies the way image should be read.
      - cv2.IMREAD_COLOR / 1: Loads a color image. Any transparency of image will be neglected. It is the default flag.
      - cv2.IMREAD_GRAYSCALE/0 : Loads image in grayscale mode
      - cv2.IMREAD_UNCHANGED/-1 : Loads image as such including alpha channel
        - » alpha channel controls the transparency of a color
- **Display an image**
  - cv2.imshow(**arg1, arg2**)
    - arg1 - window name
    - arg2 - image
- **cv2.waitKey(N)** It waits for N milliseconds for any keyboard event, try don't include it, try N=8, 8000, 0
- **cv2.destroyAllWindows()** simply destroys all the windows we created

Part A: Display Image

IMREAD_COLOR = 1

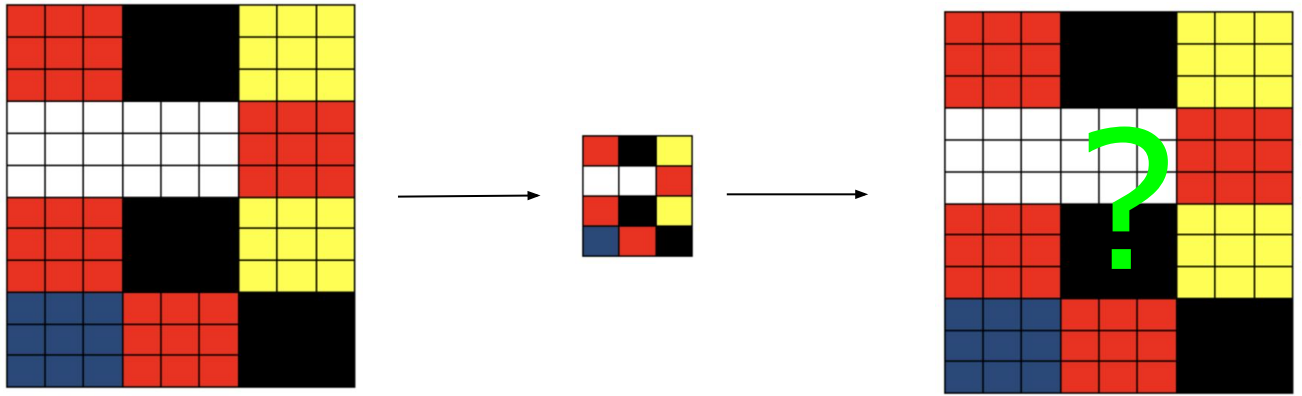
IMREAD_COLOR = 0

IMREAD_COLOR = -1

Part B: Down-sample Image

Selecting one single value to represent several values in a part of the image.

- It makes the data of a more manageable size
- Reduces the dimensionality of the data thus enabling in faster processing of the data (image)
- Reducing the storage size of the data



Part C: Quantize Image

Mapping of a large range of possible sample values into a smaller range of values or codes.

A gray image of 256 levels

a gray image of 16 levels

a gray image of 2 levels

Thank you

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