Intensity Transformations and Neighborhood Filtering

The libraries used for this Assignment

Text

Description automatically generated

Text

Description automatically generatedA person with a cigarette in her mouth

Description automatically generated with medium confidenceA picture containing text, person, person, hair

Description automatically generated

1.

Chart, line chart

Description automatically generated

A picture containing graphical user interface

Description automatically generatedText

Description automatically generated2.

Chart, line chart

Description automatically generated

A picture containing text, watch

Description automatically generated

A picture containing person

Description automatically generatedText

Description automatically generated3.

A picture containing chart

Description automatically generatedA picture containing graphical user interface

Description automatically generatedGraphical user interface

Description automatically generated

The images are created with the different gamma values. We can understand the result of the change in gamma value in images. As gamma increases the histogram’s area moves towards right side.

Chart, line chart, histogram

Description automatically generatedText

Description automatically generated4.

A picture containing fruit, close

Description automatically generated

Graphical user interface

Description automatically generatedText

Description automatically generated5.

A collage of a person

Description automatically generated with medium confidence

Graphical user interface, website

Description automatically generated

A screenshot of a computer

Description automatically generated with medium confidence6. With the 2dfilter

A person with a mustache

Description automatically generated with low confidence

A person with a mustache

Description automatically generated with low confidenceText

Description automatically generated

By Associative property of Convolution

A picture containing graphical user interface

Description automatically generatedText

Description automatically generated

A picture containing text, posing, necktie

Description automatically generatedText

Description automatically generatedBy direct convolution method

A group of yellow flowers

Description automatically generated with low confidence

A picture containing text, plant, flower

Description automatically generatedText

Description automatically generated7. a.

A group of yellow flowers

Description automatically generated with medium confidence

Text

Description automatically generatedb.

c.

For this que we can take the background image of 31th cell the daisy flower is replaced by black or dark palate that covers all the flower. when we apply the gaussian blur effect to this image the neighborhood of the edge of the flower is influenced by these dark pixels causing such effect in the last enhanced image(even the gaussian blurred background image will have this same effect)