Title : Matlab Assignment 1 "Digital Image Processing"

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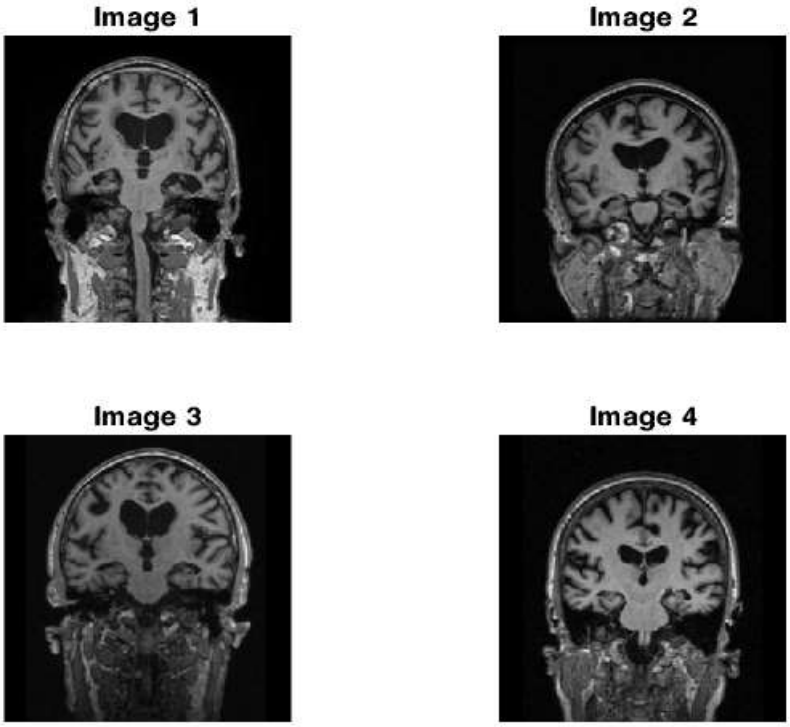
```
clear
close
```

1-Read MRI images from directory

```
imds = imageDatastore({'1.png','2.png','3.png','4.png'});
img1 = readimage(imds,1);
img2 = readimage(imds,2);
img3 = readimage(imds,3);
img4 = readimage(imds,4);
```

2- Show images on subplot

```
subplot(2,2,1);
imshow(img1)
title('Image 1')
subplot(2,2,2);
imshow(img2)
title('Image 2')
subplot(2,2,3);
imshow(img3)
title('Image 3')
subplot(2,2,4);
imshow(img4)
title('Image 4')
```



3- Use different filter for each image

Image 1 :Inverted using Dehazing Algorithm

Image 2:Reduce the haze using the imreducehaze function

Image 3:Histogram equalization

Image 4:Contrast-limited adaptive histogram equalization

```
image1_Invert = imcomplement(img1);
image2_Invert = imreducehaze(img2);
image3_Invert = histeq(img3);
image4_Invert = adapthisteq(img4);
```

4- Show filtered images

```
F=figure;
subplot(2,2,1);
imshow(image1_Invert)
title('Image 1:Inverted imge');
subplot(2,2,2);
imshow(image2_Invert)
title('Image 2:Reduce the haze')
subplot(2,2,3);
imshow(image3_Invert)
title('Image 3:Histogram equalization')
subplot(2,2,4);
imshow(image4_Invert)
title('Image 4:Adaptive histogram')
```

5- Save images

```
saveas(F,'result.png');
```

Image 1:Inverted imge

Image 2:Reduce the haze

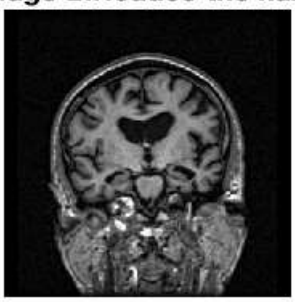


Image 3:Histogram equalization

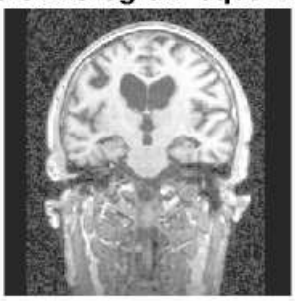


Image 4:Adaptive histogram

6- References:

1- https://www.mathworks.com/

2- https://www.kaggle.com