Mid Paper Sec C

November 14, 2023

1 Mid Paper for Lab

1.1 Programming for AI————————————————————-Section C

1.2 Total Time: 1 hour and 15 minutes————————————Total Marks: 45

1.2.1 Guidelines

- Rename this file in following formate <roll no><name>
- Attempt all questions
- You may keep a rough page with you for rough work in case needed.
- You will have initial five minutes to download instructions and questions after that if you are using internet, your exam will be cancelled.
- You are not allowed to use mobile phone during exam.
- You will not be allowed to go out of lab unless you submit exam.
- Extra time will not be provided.
- After exam you will have 5 minutes for submission, after which the submission will close.
- If you are involved in discussion then both students who are talking will have to submit exam and leave immediately.
- Please sit according to your roll numbers starting from first row behind the door.
- If your code is similar to the person near you, both will get no marks for that part.
- Make sure to keep saving file after every few minutes to avoid inconvinience

[72]:
```
import cv2
import nltk
import pandas
import numpy
import librosa
import matplotlib.pyplot as plt
import IPython
from skimage import filters
from skimage import feature
```

1. a. Load an image and equalize it, show histogram of original image and equalized image. (10 minutes, 5 marks)

- b. Read image again, apply gausian blur and hog to image and show resulst. (10 minutes, 5 marks)

[ ]:
```
# YOUR CODE HERE
```

2. Read the given image same as Q1 in grey scale, flatten the image, and convert it to audio. Display audio use sample rate as 10000 and visualize it's STFT using specshow. (15 minutes, 10 marks)

```
[ ]: # YOUR CODE HERE
```

3. Read file match.csv, show all the outliers using box plot in column Won_By Deal with missing or null values if any. (10 minutes, 5 marks)

```
[ ]: # YOUR CODE HERE
```

4. Read the provided csv file. Your job is to do sentiment analysis for each review given by a user. You will do classify reviews as follows: (30 minutes, 20 marks)

- Read a review. Remove stop words from it. Positive words, negative and stopwords are given in the same csv file. The stop words are separated by coma (,).
- Create unigrams of filtered words and compute their frequency.
- Classify sentiments based on the following conditions.
- Check from which category most of the words belong in review, positive, negative, neutral (if both are equal). You will ave to use frequency of unirams. If a word matches, you will have to see how many times has it occured in review.
- Classify the reviews by category and display a chart showing from which category does reviews belong to.
- Words for each category are given in the same file under positive, negative, and stopwords column names.

```
[ ]: # YOUR CODE HERE
```