Department of Electrical Engineering and Computer Science

CIS 465 Multimedia
Fall 2021

Assignment 5
(Due date: 11/17/21)

1. Write a program to implement the key frame selection technique for video summarization, find the video (basketball) on Blackboard. Obtain the adaptive threshold using the mean of the statistical differences of each batch with its corresponding standard deviation. Investigate and discuss the influence of changing the batch size using:

    a) 29 frames
    b) 145 frames
    c) The whole video frames

    You may set the constant value (β) is 0.5 or any other.

2. Retrieve the video at 30 fps using only the key frames that have been selected from part 1 (b) (Use the original corresponding RGB frames).

There is no need to show all the video frames in your html results file. But you need to show some samples where you see the effectiveness of changing the batch size as a support to your discussion.

What to turn in:

Submit your work through **Blackboard** as **one single** folder including:

-   An HTML file called `index.html` that links to the overall summary of your answers (screenshot of part 1 output).
-   A folder called `CIS_465` that includes all files, program codes along with the supported files, dataset needed to reproduce your code (if any), etc.

Notes:
-   Please make sure that your program runs successfully at other machines!
-   Late submissions will receive a penalty of 10% per day up to two days.
-   No material will be accepted after two days past the deadline.
-   Email submissions will not be accepted.