

Cmput414 Lab7

Qingyang Zhang, Bowei Wang

March 11, 2019

1 Tasks:

1.1 Find an appropriate video as the input(finished)

A free personal use video is downloaded from:

<https://videos.pexels.com/videos/beach-aerial-footage-taken-by-a-drone-854218>.

1.2 Implement the original content-based video segmentation method(processing)

1.Accessing the video by frames.Then transfer the frame into matrixes.(finished)

2.Progressing the algorithm to compare the matrixes. As Figure 2 shows, the frame number 280, 672, 760 and 1161 are the sharply changed frames. That representating the content change. This can also be detected from the plot Figure 1.Our next step is to divide the video based on the information collected from the plot.

3.Output different contents.

(There are many different methods for output, it can be segment of videos or single frames)

4.github page for work tracking. ¹

1.3 Controller(processing)

Currently we will implement some simple terminal controller to send command to the program.

2 Optional Tasks:

2.1 Pretratment or videos

1.If the video is too large, compress the video into smaller format .

2.Calling an api to cut the video into single frames. It will be easier for program to access the video.

¹<https://github.com/cmput414-content-video-segmentation/content-based-video-segmentation>

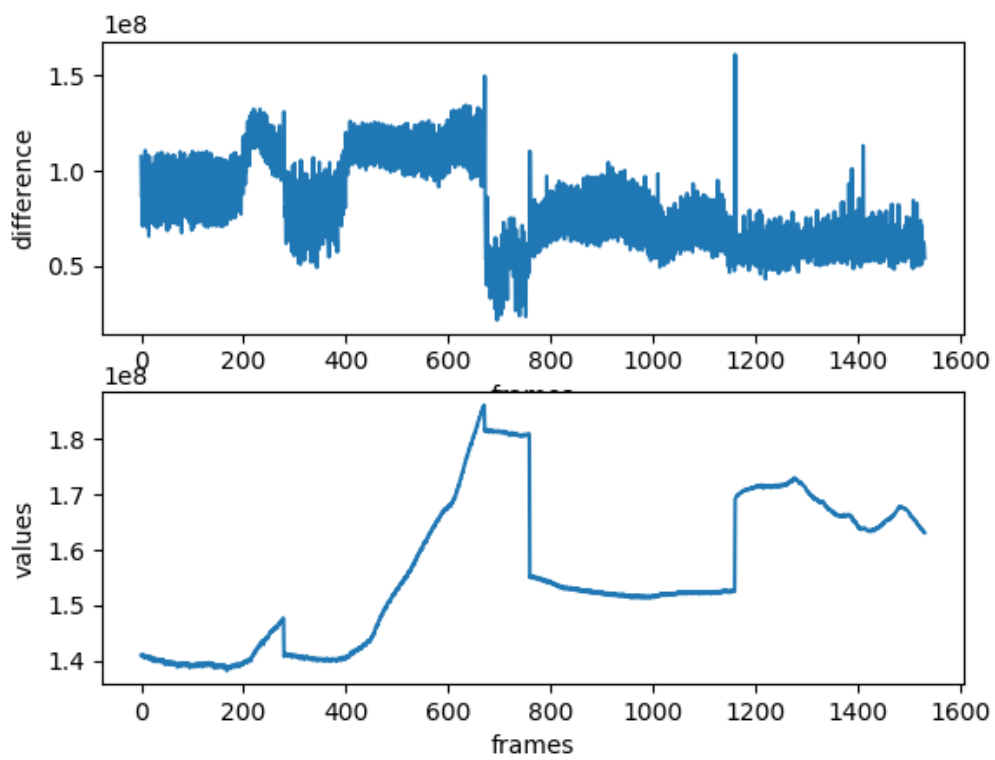
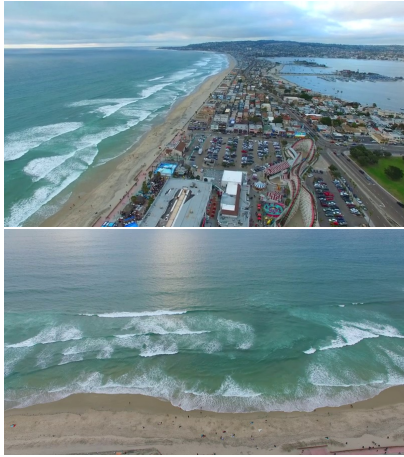
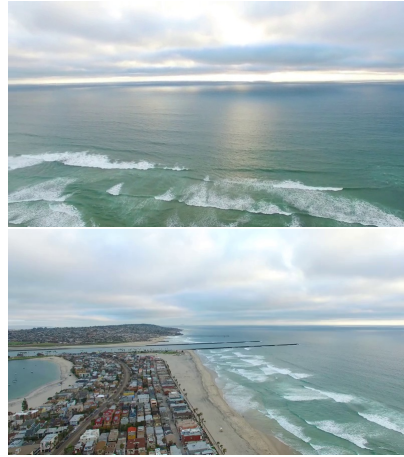


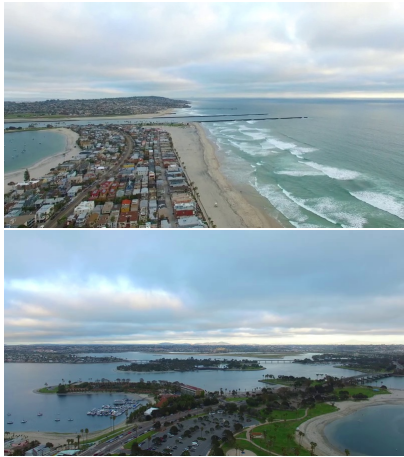
Figure 1: Plot of the difference and values of the frames



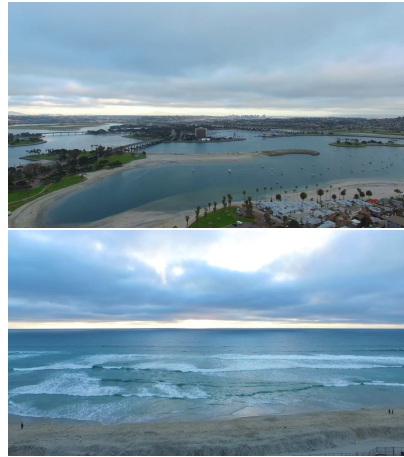
(a) frame 279 and 280



(b) frame 671 and 672



(c) frame 759 and 760



(d) frame 1160 and 1161

Figure 2: frames comparison

2.2 User interface

User interface is optional, but can make the program looks better.