


Assignment 4

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1. To run the code, open the folder in your IDE. The zip file submitted already has the frames and intensity filled out. The ffmpegConverter file will get each frame from the video and output it to videoFrames. The readFrames file reads each frame and gets the intensity for each frame and outputs it into intensity.txt. Run these first before running the VideoShotBoundarySystem, or else there won't be intensities or frames to read from (Don't need to for this since I already have them prefilled, but if you remove them then do the above.) VideoShotBoundaryDetection file then will then calculate each shot. The GUI will output where the cut or transition is in the console. There's a display all Frames button that will output all the cuts and transitions to the console. An additional button is a random one where it'll just pick a random cut in the array.
2. I used FFMPEG which is pretty simple to use. It uses the command line and can convert videos and audio, etc. I used it to convert the .avi file to each frame stored in a jpg. ReadFrames was basically reused of assignments 1 and 2, with minor modifications, the same goes for the GUI. Aside from that there aren't any other libraries that blew me away.
3. The top row is tB and tS and below that are the cuts and transitions. The Cuts and Transitions are from the all frames button. When clicking a button it'll display the frame of the cut in the console.

```
186     }
187     public void actionPerformed() {
188         System.out.println("Clicked button");
189         iconUsed = new ImageIcon("images/icon.png");
190         photographLabel.setIcon(iconUsed);
191     }
192
193 }
194
195 /*
196  * This class implements the VideoShotBoundarySystem interface.
197  * image number to be displayed
198  * current image count
199  */
200
201 PROBLEMS 26 OUTPUT GITLENS TERMINAL
```

```
PS C:\Users\Tony\Desktop\HW4 484> C:\Program Files\Java\jdk-11.0.2\bin\java.exe -cp "C:\Users\Tony\Desktop\HW4\bin;C:\Users\Tony\Desktop\HW4\lib" VideoShotBoundarySystem
1091
```



```
PS C:\Users\Tony\Desktop\HW4 484> C:\Program Files\Java\jdk-11.0.2\bin\java.exe -cp "C:\Users\Tony\Desktop\HW4\bin;C:\Users\Tony\Desktop\HW4\lib" VideoShotBoundarySystem
DetailsInExceptionMessages' '-cp' 'C:\Users\Tony\Desktop\HW4\bin;C:\Users\Tony\Desktop\HW4\lib' VideoShotBoundarySystem
107546.74148778182 9356.56464116029
Cut at: 1091
Cut at: 1112
Cut at: 1575
Cut at: 1618
Transition at: 1865
Cut at: 1926
Cut at: 2332
Transition at: 2406
Cut at: 2584
Transition at: 2676
Cut at: 3008
Cut at: 3050
Transition at: 3200
Cut at: 3532
Transition at: 3551
Transition at: 3624
Transition at: 3765
Transition at: 3838
Transition at: 3928
Transition at: 4042
Transition at: 4299
Cut at: 4358
Cut at: 4484
Transition at: 4561
Transition at: 4607
Transition at: 4776
Transition at: 4986
```