Workshop-1

Declaration

We, Steven David Pillay, Olha Hodovaniuk, Ruyuan Sun, Syed Moonis Iqbal, declare that the attached assignment is our own work in accordance with the Seneca Academic Policy. We have not copied any part of this assignment, manually or electronically, from any other source, including websites, unless specified as references. We have not distributed our work to other students.

Task Distribution

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| --- | --- |
| **Name** | **Task(s)** |
| Steven David Pillay | Setup Local Environment / Walkthrough for Anaconda Setup |
| Olha Hodovaniuk | Setup Local Environment / Setup Team Meeting |
| Ruyuan Sun | Setup Local Environment / Draft the Team Contract |
| Syed Moonis Iqbal | Setup Local Environment / Review |

Questions

Briefly explain what you do and don’t understand in this code?

The purpose of this code is to reads frames from a video, creates an output file, and writes to that file at the set framerate.

* The code imports the **OpenCV** library, opens the video file '**inputvideofilepath'**, and checks if the video opened successfully.
* It then gets the video's height and width, to get the video's resolution.
* A variable named '**frame\_rate'** is defined, which sets the framerate for the output video.
* A **VideoWriter** object is initialised using the '**DIVX'** codec, output file path, resolution and **frame\_rate**.
* The code then reads the input video, converts it from BGR to HSV colorspace, and then writes to **'TestVideo1.avi'** at the set framerate.
* Afterwards, the code waits on the user to press q to to exit. The waitKey(25) waits for 25 milliseconds for the key to be pressed and quits the progra once the ey is pressed.
* Finally, it frees up the memory used by the video input and output objects.

Change the frame-rate parameter {5, 10, 20, 25, 30} and check both size and duration of the saved video. Can you briefly explain what is going on?

Changing the **'frame\_rate'** only significantly affects the duration of the video, and not the size. Since changing the **'frame\_rate'** parameter only alters how often the frame is written to a video (or how many frames the video has in 1 second), the duration becomes shorter or longer, depending on a higher or lower framerate. As the same amount of frames are written to the file, the size remains the same.