Using Timelapse_Script.py - Procedurally Generated Smart Timelapse

1. Begin by downloading the Python script and saving it to your computer.
    a. The file is named “Timelapse_Script.py”
    b. Keep note of the directory you save this file to
2. Open command line/terminal and cd to the directory the file is in.
    a. E.g. ‘cd C:\Users\jingl\OneDrive - UW\Work\Wyze’
3. To run the file, type ‘python Timelapse_Script.py’ or ‘python3 Timelapse_Script.py’
    a. You may need to download certain packages in order to run the code. The following commands may help with this.
        i. imutils: ‘pip install imutils’
        ii. opencv: ‘pip install opencv-python’
4. A window should pop up showing the camera preview. When this is visible it means that the timelapse has begun recording.
5. To stop recording/quit, select the camera preview window and press ‘q’. This will close the preview and stop the code.
    a. The output video will then be saved to the current directory.
    b. The filename of the output video can be set near the top of the file.

Troubleshooting:

Certain features can be modified in the global variables set at the top of the Python file. To modify them, open the file in notepad or an IDE and change the values near the top of the file.

If motion detection is being triggered too easily, MIN_CONTOUR_SIZE can be modified; this is the minimum size for a detected moving object or face to count as a motion/face event.

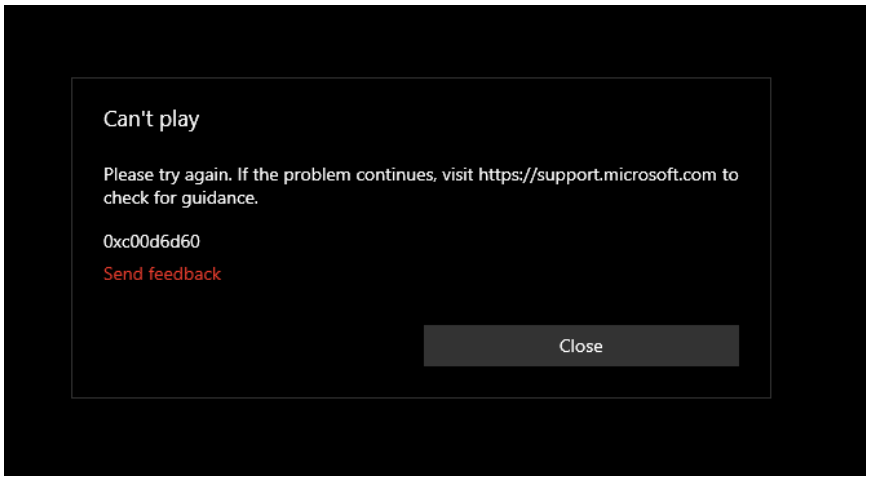
Exposure can also be modified. It is currently set to auto, but exposure can be locked by setting AUTO_EXPOSURE = False and modifying the EXPOSURE_LOCK value. Ideally this value should be set so that the frame looks relatively dark, which will help avoid false detections. If motion is being detected even when there is no moving object, this may be something to try. To check, toggle DRAW_MOTION_BOXES to True and if you see a green box covering a large portion of the frame then there are likely exposure changes that are registering as motion events.

CAMERA_SOURCE may need to be modified if your computer has multiple webcams. Usually it is 0 or 1 depending on the device you are running the script on.

The detection boxes can be helpful to include for debugging/troubleshooting purposes. These can be modified by changing the values of DRAW_FACE_BOXES and DRAW_MOTION_BOXES.

To modify the playback speed of face events and motion events, modify FACE_EVENT_PERIOD and MOTION_EVENT_PERIOD (must be integers). The face event is currently set to playback at 1x speed. The motion events are currently set to playback at 2x speed.

Sometimes, I have noticed that the output video has this error when opening using the default “Movies and TV” application:



I couldn’t find a clear reason why this is occurring but I found that opening the video file using a different video player resolves the issue. The Photo Gallery, Windows Media Player, and Photos apps tend to work for me: