**Research on converting the videos to images using Python Libraries**

Research links are as follows –

Image Processing Tools ->

1. OpenCV
2. Scikit-image
3. PIL/pillow
4. Numpy
5. Mahotas

Library used – open cv

import cv2

1. <https://geeksforgeeks.org/extract-images-from-video-in-python/>
2. <https://iq.opengenus.org/convert-video-to-images-in-python/>
3. <https://morioh.com/p/0cbc8ac635b9>
4. <https://github.com/akash-rajak/Video-to-Images>
5. <https://neptune.ai/blog/image-processing-python>

**Deep Learning Method to Calculate the Screen Time of Actors in any Video (with Python codes)**

Libraries used –

* [**Numpy**](https://scipy.org/install.html)
* [**Pandas**](https://scipy.org/install.html)
* [**Matplotlib**](https://scipy.org/install.html)
* [**Keras**](https://keras.io/#installation)
* [**Skimage**](http://scikit-image.org/docs/dev/install.html)
* [**OpenCV**](https://pypi.org/project/opencv-python/)

**# Code**

* import cv2     # for capturing videos
* import math   # for mathematical operations
* import matplotlib.pyplot as plt    # for plotting the images
* %matplotlib inline
* import pandas as pd
* from keras.preprocessing import image   # for preprocessing the images
* import numpy as np    # for mathematical operations
* from keras.utils import np\_utils
* from skimage.transform import resize   # for resizing images

### **Step – 1: Read the video, extract frames from it and save them as images**

Now we will load the video and convert it into frames**. You can download the video used for this example from**[**this link**](https://drive.google.com/file/d/1_DcwBhYo15j7AU-v2gN61qGGd1ZablGK/view?usp=sharing). We will first capture the video from the given directory using the VideoCapture() function, and then we’ll extract frames from the video and save them as an image using the imwrite() function. Let’s code it:

# import the necessary packages

import cv2

import imutils

import math

count = 0

videoFile = "Tom and jerry.mp4"

cap = cv2.VideoCapture(videoFile) # capturing the video from the given path

frameRate = cap.get(5) #frame rate

x=1

while(cap.isOpened()):

frameId = cap.get(1) #current frame number

ret, frame = cap.read()

if (ret != True):

break

if (frameId % math.floor(frameRate) == 0):

filename ="frame%d.jpg" % count;count+=1

cv2.imwrite(filename, frame)

cap.release()

print ("Done!")