WK4 Report

It's coding time

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Read for 1000 REAL videos

Read for 1000 DeepFake videos

```
9 print(list_filenames[0])
```

/content/drive/MyDrive/American_University/2021_Fall/DA
/content/drive/MyDrive/American_University/2021_Fall/DA
Successfully change the directory!
Number of files: 1000
Restoring the path
Current directory is- /content/drive/MyDrive/American_U
599_585.mp4

```
Creating..../data/real_video1_2.jpg
Creating..../data/real_video1_3.jpg
Creating..../data/real_video1_4.jpg
Creating..../data/real_video1_5.jpg
Creating..../data/real_video1_6.jpg
Creating..../data/real_video1_7.jpg
Creating..../data/real_video2_1.jpg
Creating..../data/real_video2_2.jpg
Creating..../data/real_video2_3.jpg
Creating..../data/real_video2_4.jpg
Creating..../data/real_video2_5.jpg
Creating..../data/real_video2_6.jpg
```

Write a for loop in Python to extract the images in every 30 frames

Extract up to 7 frames from 1000 DeepFake videos

Some DeepFake videos may fool our eyes

Extract up to 7 frames from 1000 REAL videos

Image in Programming Domain

```
(720, 1280, 3)
(720, 1280, 3)
(720, 1280, 3)
(720, 1280, 3)
(720, 1280, 3)
(480, 854, 3)
(480, 854, 3)
(720, 1280, 3)
(720, 1280, 3)
(720, 1280, 3)
10
```

Algorithm 1 DeepFake Detection Algorithm

Input : D_{real}, D_{fake} were centered by subtracting the mean of the real training data,

```
[[[  50   30   93]
  [  42   54  152]
  [  24   71  213]
  ...
  [  10   55  219]
  [  10   40  172]
  [   4   21  125]]

 [[  48   27   92]
  [  43   52  153]
  [  23   69  214]
  ...
  [  12   56  223]
  [  12   42  176]
  [   7   24  130]]

 [[  48   25   93]
  [  42   51  154]
  [  23   69  216]
  ...
  [  17   59  229]
  [  15   44  182]
  [  10   27  135]]
```

```
[[[-0.43175367 -0.65193266  0.0416312 ]
  [-0.5198253  -0.38771784  0.69115925]
  [-0.71798635 -0.2005657   1.3627052 ]
  ...
  [-0.8721117  -0.3767089   1.428759  ]
  [-0.8721117  -0.5418432   0.91133827]
  [-0.93816537 -0.7510132   0.39391762]]

 [[-0.45377156 -0.68495953  0.03062226]
  [-0.5088163  -0.40973577  0.7021682 ]
  [-0.7289953  -0.2225836   1.3737142 ]
  ...
  [-0.8500938  -0.36569995  1.4727948 ]
  [-0.8500938  -0.5198253   0.95537406]
  [-0.9051385  -0.71798635  0.44896236]]
```