

# Exercise 3 Report

**A brief description about how ffprobe and ffmpeg has been installed and configured in your machine.**

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## 1) Installing Latest FFmpeg static build

```
In [1]: # Download Latest FFmpeg static build.
exist = !which ffmpeg
if not exist:
    !curl https://johnvansickle.com/ffmpeg/releases/ffmpeg-
release-amd64-static.tar.xz -o ffmpeg.tar.xz
    && tar -xf ffmpeg.tar.xz && rm ffmpeg.tar.xz
    ffmpegdir = !find . -iname ffmpeg-*-static
    path = %env PATH
    path = path + ':' + ffmpegdir[0]
    %env PATH $path

!which ffmpeg

/usr/bin/ffmpeg
```

Source : Coursera Exercise week 19

If ffmpeg does not exist in the computer, it will install ffmpeg from the link using the !curl command. Then the PATH is set which means ffmpeg can be used to convert the video files.

## A brief analysis of the application.

This application makes use of ffprobe and ffmpeg. ffprobe helps to collect information of the video file like the metadata and the stream information. It helps to present the information in a way that humans can understand (human readable).

ffmpeg helps to convert the video files in way that the resulting video file will contain the desired format.

The application reads the video files using ffprobe and uses ffmpeg to convert video files into a format desired by the Narbonne Online Film Festival.

The first video which is **Cosmos\_War\_of\_the\_Planets.mp4**, its meta data was printed using ffprobe. Upon checking the stream data provided by ffprobe, the format frame rate, aspects ratio, resolution and the audio bit rate of the **Cosmos\_War\_of\_the\_Planets.mp4** was incorrect. ffmpeg was used to change all incorrect formats to the desired format and saved the new file as **Cosmos\_War\_of\_the\_Planets\_formatOK.mp4**.

The second video which is **The\_Gun\_and\_the\_Pulpit.avi**, its meta data was printed using ffprobe. Upon checking the stream data provided by ffprobe, the format of the video codec, audio codec, aspect ratio, audio channel, video bit rate, audio bit rate and resolution of the **The\_Gun\_and\_the\_Pulpit.avi** was incorrect. ffmpeg was used to change the incorrect formats to the desired format and the converted video file is save as **The\_Gun\_and\_the\_Pulpit\_formatOK.mp4**

The third video which is **The\_Hill\_Gang\_Rides\_Again.mp4**, its meta data was printed using ffprobe. Upon checking the stream data provided by ffprobe, the format of the video bit rate of the **The\_Hill\_Gang\_Rides\_Again.mp4** was incorrect. ffmpeg was used to change the incorrect format to the desired format and save the converted video file as **The\_Hill\_Gang\_Rides\_Again\_formatOK.mp4**.

The fourth video which is **Last\_man\_on\_earth\_1964.mov**, its meta data was printed using ffprobe. Upon checking the stream data provided by ffprobe, the formats of the video, video codec, video bit rate, frame rate, audio bit rate and the audio codec of the **Last\_man\_on\_earth\_1964.mov** was incorrect. ffmpeg was used to change the incorrect format to the desired format and the converted file is saved as **Last\_man\_on\_earth\_1964\_formatOK.mp4**.

The fifth video which is **Voyage\_to\_the\_Planet\_of\_Prehistoric\_Women.mp4**, its meta data was printed using ffprobe. Upon checking the stream data provided by ffprobe, the formats of the video codec, video bit rate, frame rate, audio bit rate and the audio codec in the audio file **Voyage\_to\_the\_Planet\_of\_Prehistoric\_Women.mp4** was incorrect. ffmpeg was used to change the incorrect format to the desired format and the converted file is saved as **Voyage\_to\_the\_Planet\_of\_Prehistoric\_Women\_formatOK.mp4**.

## A brief description of the terms

**Video Format (Container)** refers to a data structure that contains and stores metadata of an audio or video file and the stream data. An example of container includes .mp3, .mkv, .avi.

**Video Codec** is a software which consists of computational algorithm that helps to compresses and decompressed video signals based on certain rules so that the video file can be stored.

**Audio Codec** is a software that used to compress and decompress digital audio data

**Frame rate** of a video file refers to the number of separate frames that are shown to the user per second.

**Aspect ratio** refers to the relationship between the width and height of the video. I

**Resolution** refers to how clear a video is and it also describes how sharp the quality of the video is.

**Video bit rate** refers to the amount of video bits that is being transferred within a second.

**Audio bit rate** refers to the amount of audio bits that is being transferred in an audio file per second

**Audio channel** refers to the sound traversing from or moving towards a point. The audio channel used by the video files in this application is stereo.