A Project Report on

VIDEO TO AUDIO CONVERSION

# Bachelor of Technology in

Department of Computer Science and Engineering

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**DECLARATION**

The Project Report entitled “Video to Audio Convertor” is a record of bonafide work of

V. Abhiram (2010030180) , K Sidharth Rao (2010030443), Rokkam Vivek Vardhan Reddy (2010030142), A. Raghavendra Goud (2010030394), submitted in partial fulfillment for the award of B.Tech in the Department of Computer Science and Engineering to the K L University, Hyderabad. The results embodied in this report have not been copied from any other Departments/University/Institute.

**CERTIFICATE**

This is to certify that the Project Report entitled “Video to Audio Converter” is being submitted by V. Abhiram (2010030180), K Sidharth Rao (2010030443), Rokkam Vivek Vardhan Reddy(2010030142), A.Raghavendra Goud (2010030394) submitted in partial fulfillment for the award of B.Tech in to the K L University, Hyderabad is a record of bonafide work carried out under our guidance and supervision.

The results embodied in this report have not been copied from any other departments / University/Institute.

## Signature of the Supervisor

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**ABSTRACT**

Converting Video to audio files is a smart tool to extract audio from video files. we will take you through a simple program to build a video to audio converter with Python programming language. It is most often used to record the soundtrack of videos or to extract other audio tracks from videos where you are only interested in the sound.

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**1. INTRODUCTION**

Converting video to audio files is very essential step when you are passionate music mixer or you like to create videos using different sound effects. It will be easy Gather Sound Effects to do Remixes, special versions or covers of popular songs with desirable audio files then from video files. You can store the audio of your favourite video which may not be found from other sources. It also helps to save space, improves Sound quality, Extract Famous Movie Quotes.

**2. LITERATURE SURVEY**

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| --- | --- | --- | --- | --- |
| AUTHOR | TITLE | PUBLISHING | TECHNIQUES | DESCRIPITION |
| Joseph Redfern | Video to Audio Conversion for the Visually Impaired | School of Computer Science & Informatics Cardiff University | vOICe | The technique described as “An Experimental System for Auditory Representations” sonifies an object/scene by producing a 1:1 mapping from video to audio. This  is accomplished by generating a sound, such that a visualisation of the frequency spectrum of the sound produces the input video. |
| Dr Kirill Sidorov | Generating Audio-Visual Slideshows from Text Article | Digital Library | EyeMusic | EyeMusiC is fundamentally the same as vOICe, but with a different choice of sounds  , and additional video segmentation. It works by  clustering the input video into red, green, white, blue and yellow components. |
| Dr George Theodorakopoulos | Video to Audio Conversion for the Visually Impaired | School of Computer Science & Informatics Cardiff University | Virtual Acoustic Space | A paper by Gonzalez-Mora, J.L. et al describes a method involving VAS.VAS works  by simulating the sound that a user would hear if a point source at a particular angle and  distance from the user was emitting a tone. For each frame, several points are placed  the field of view of the camera is divided into a 17 9 grid, with a point inserted in each  division |

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| --- | --- | --- | --- | --- |
| Joseph Redfern | Bioinformatics | Oxford Academic | TheVIBE | This paper describes a technique whereby points are assigned to “receptive fields”.  Each field has a static position, and is assigned loudness, determined by the Z-axis |

# **3. HARDWARE AND SOFTWARE REQUIREMENTS**

* HARDWARE:

Modern Operating System:

* + Windows 7 or 10
  + Mac OS X 10.11 or higher, 64-bit
  + Linux: RHEL 6/7, 64-bit (almost all libraries also work in Ubuntu)

x86 64-bit CPU (Intel / AMD architecture)

4 GB RAM

5 GB free disk space

* SOFTWARE:

Python3

Pycharm community(IDE)

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# **4. FLOW CHART**

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# Fig(4.1)workflow

# **5. PROPOSED SYSTEM**

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1. Tkinter:

The [tkinter](https://docs.python.org/3/library/tkinter.html" \l "module-tkinter" \o "tkinter: Interface to Tcl/Tk for graphical user interfaces) package (“Tk interface”) is the standard Python interface to the Tcl/Tk GUI toolkit. Both Tk and [tkinter](https://docs.python.org/3/library/tkinter.html" \l "module-tkinter" \o "tkinter: Interface to Tcl/Tk for graphical user interfaces) are available on most Unix platforms, including macOS, as well as on Windows systems.

Running python -m tkinter from the command line should open a window demonstrating a simple Tk interface, letting you know that [tkinter](https://docs.python.org/3/library/tkinter.html" \l "module-tkinter" \o "tkinter: Interface to Tcl/Tk for graphical user interfaces) is properly installed on your system, and also showing what version of Tcl/Tk is installed, so you can read the Tcl/Tk documentation specific to that version.

1. os:

The OS module in Python provides functions for creating and removing a directory (folder), fetching its contents, changing and identifying the current directory, etc.

You first need to import the os module to interact with the underlying operating system. So, import it using the import os statement before using its functions.

1. moviepy:

MoviePy is a Python library for video editing: cutting, concatenations, title insertions, video compositing (a.k.a. non-linear editing), video processing, and creation of custom effects.

MoviePy can read and write all the most common audio and video formats, including GIF, and runs on Windows/Mac/Linux, with Python 2.7+ and 3 (or only Python 3.4+ from v.1.0).

1. PIL:

Pillow is the friendly PIL fork by [Alex Clark and Contributors](https://github.com/python-pillow/Pillow/graphs/contributors). PIL is the Python Imaging Library by Fredrik Lundh and Contributors. As of 2019, Pillow development is [supported by Tidelift](https://tidelift.com/subscription/pkg/pypi-pillow?utm_source=pypi-pillow&utm_medium=readme&utm_campaign=enterprise).

The Python Imaging Library adds image processing capabilities to your Python interpreter.

This library provides extensive file format support, an efficient internal representation, and fairly powerful image processing capabilities.

The core image library is designed for fast access to data stored in a few basic pixel formats. It should provide a solid foundation for a general image processing tool.

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**6. IMPLEMENTATION**

CODE:

from tkinter import \*

from tkinter import filedialog

import os

from PIL import ImageTk

import moviepy.editor as mp

class VideoAudioConverter:

def \_\_init\_\_(self, root):

self.root = root

self.root.title("VIDEO-AUDIO CONVERTER")

self.root.geometry('1280x720')

self.bg = ImageTk.PhotoImage(file="bg\_image.jpg")

Label(self.root, image=self.bg).place(x=0, y=0)

Button(self.root,text="Browse Files",font=("times new roman", 15),command=self.browse).place(x=530, y=550)

def browse(self):

self.file\_name = filedialog.askopenfilename(title="Select a File", filetypes=(("Video files", "\*.mp4\*"),))

Label(self.root, text=os.path.basename(self.file\_name), font=("times new roman", 20), bg="blue").place(x=200, y=630)

Label(self.root, text='Processing...', font=("times new roman", 30)).place(x=600, y=630)

self.convert(os.path.basename(self.file\_name))

Label(self.root, text='Completed!!', font=("times new roman", 30)).place(x=1000, y=630)

def convert(self, path):

clip = mp.VideoFileClip(r'{}'.format(path))

clip.audio.write\_audiofile(r'{}mp3'.format(path[:-3]))

def main():

root = Tk()

obj = VideoAudioConverter(root)

root.mainloop()

if \_\_name\_\_ == "\_\_main\_\_":

main()

**7. RESULT**

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Fig(7.1)front end of the application

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Fig(7.2)video to audio conversion process

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Fig(7.3)conversion completed and file obtaine

**8. CONCLUSION**

Thus, by following the above technique, we can convert a mp4 file into an mp3 file. In the cases where we will need only the audio in the video files, we can use this technique to extract and save the audio file, which will help in saving the memory too. Here, the user will have the comfort of selecting his desired vedio, and can convert it into audio form.

Converting a video to audio has many advantages and is very useful in our amateur learning. The above-mentioned technique can be used in achieving this. But when you want to convert some videos containing sensitive information, desktop applications that can work without a network would be a better choice.

It will not upload your videos to its service and change the file format by offline transcoding.

**9. REFERENCES**

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