Media Viewer

A Project Work Synopsis

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DECLARATION

I, **Daksh, Pranav Garg, Aman Jain, Riya** student of **'Computer Science Engineering in Artificial Intelligence and Machine Learning'**, **Session: 2019-23**, Department of Computer Science and Engineering, Apex Institute of Technology, Chandigarh University, Punjab, hereby declare that the work presented in this Project Work entitled '**Media Viewer'** is the outcome of our own bona fide work and is correct to the best of our knowledge and this work has been undertaken taking care of Engineering Ethics. It contains no material previously published or written by another person nor material which has been accepted for the award of any other degree or diploma of the university or other institute of higher learning, except where due acknowledgment has been made in the text.

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THANKS AGAIN TO ALL WHO HELPED

ABSTRACT

We hope to achieve our project work that we can enable the user to explore a list of pictures and video stored on their device. It is also possible to preview an image, play a music file, and check the details of the selected file on a separate page.The main goal of the project was to present to the user media files stored on the device. To achieve this, we need to scan for media files in the device file system. In the case of a Qt application for Symbian this was not a problem, since the Symbian file system is fully accessible for developers. However, Windows Phone 7 has a much more restrictive policy. WP7 applications can only access their own private drive space called Isolated Storage. The rest of the file system is inaccessible for security reasons.

Windows Phone provides a XNA library which enables access to songs, playlists, and pictures in the device's media library. In Windows Phone 7.1 (Mango), developers are able - with some restrictions - to mix XNA and Silverlight in the same application.

In Windows Phone version, the UI of the app is based on 3 simple views. The first one is the main page, containing a Pivot control with two items representing the categories: pictures and videos. Selecting a list item from the category view takes the user to the picture preview or video details page. On the video details page, the video file is played in the background.

Table of Contents

1. INTRODUCTION

1.1 Problem Definition:

Media Viewer. Our goal is to improve the viewing experience for readers and easygoing editors on Wikipedia and Wikimedia locales. This new media program shows pictures in bigger size, with helpful data about their substance, creators and related metadata. Preview larger images, enlarge images, Browse related files. Offer more highlights, for example, extend, download, share and install. Primary users for Media Viewer are readers, casual editors and other users include experienced editors, contributors.

1.2 Project Overview:

With this project Media Viewer, a reader can tap on any picture thumbnail to see it in a bigger size, without the authorizing data. Readers see the record name and creator credits at the lower part of the screen – and see more data in an expandable board underneath the picture – with unmistakable connects to the document portrayal page for altering and more information. Watchers can grow the picture to full screen, for a more immersive experience – or browse through all images in an article or gallery by clicking on the next and previous arrows. The 'Use this file' tool makes it easier to share images with the community, add them to articles or download them for individual purposes – with full attribution to contributors.

There is option for Wikipedia account also so that people can easily enable or disable this tool in your preferences: Preferences → Appearance → Files = check or uncheck 'Enable Media Viewer', as described on this Media Viewer help page.To bypass Media Viewer and access the file description page directly, we can use one of these mouse and keyboard shortcuts when clicking on an image thumbnail:

- Shift+Click – Open the file page in a new browser window.
- Ctrl+Click – Open the file page in a new background tab.
- Ctrl+Shift+Click – Open the file page in a new foreground tab.

1.3 Hardware Specification:

1.1.1 RAM – 8GB and above

1.1.2 Graphics Card – 4GB and above

1.1.3 Processor – Intel Core i5 and above

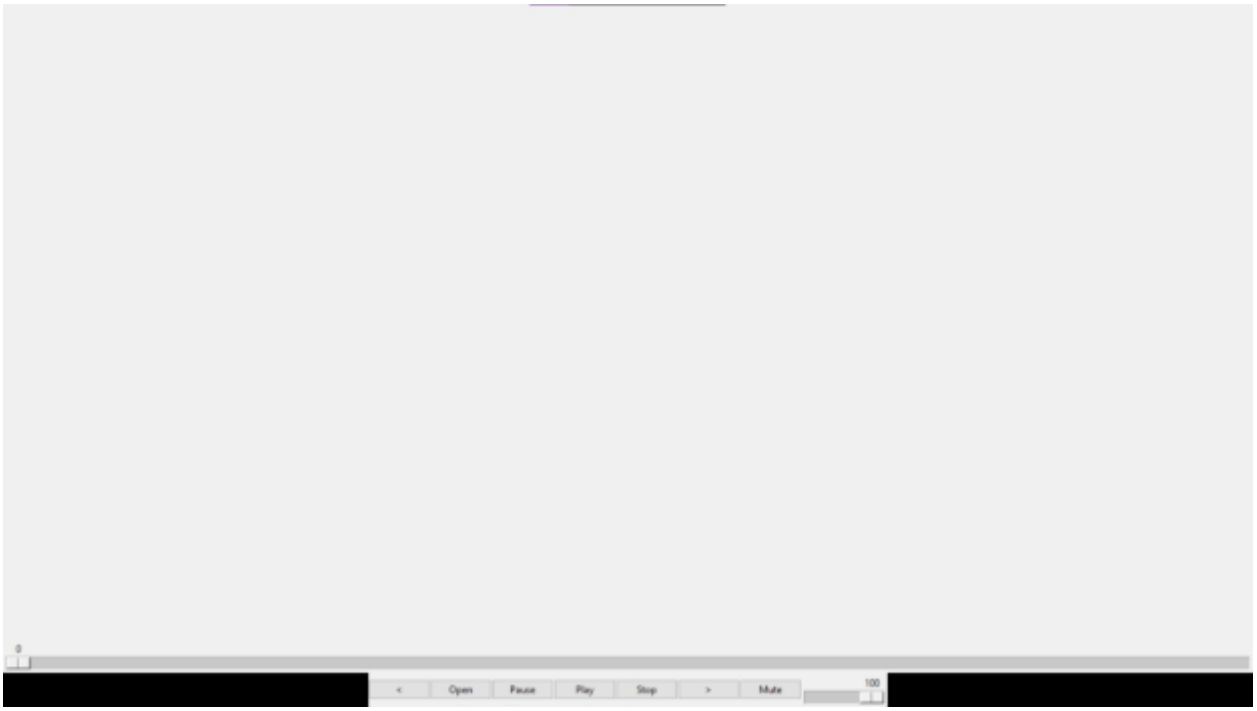
1.4 Software Specification:

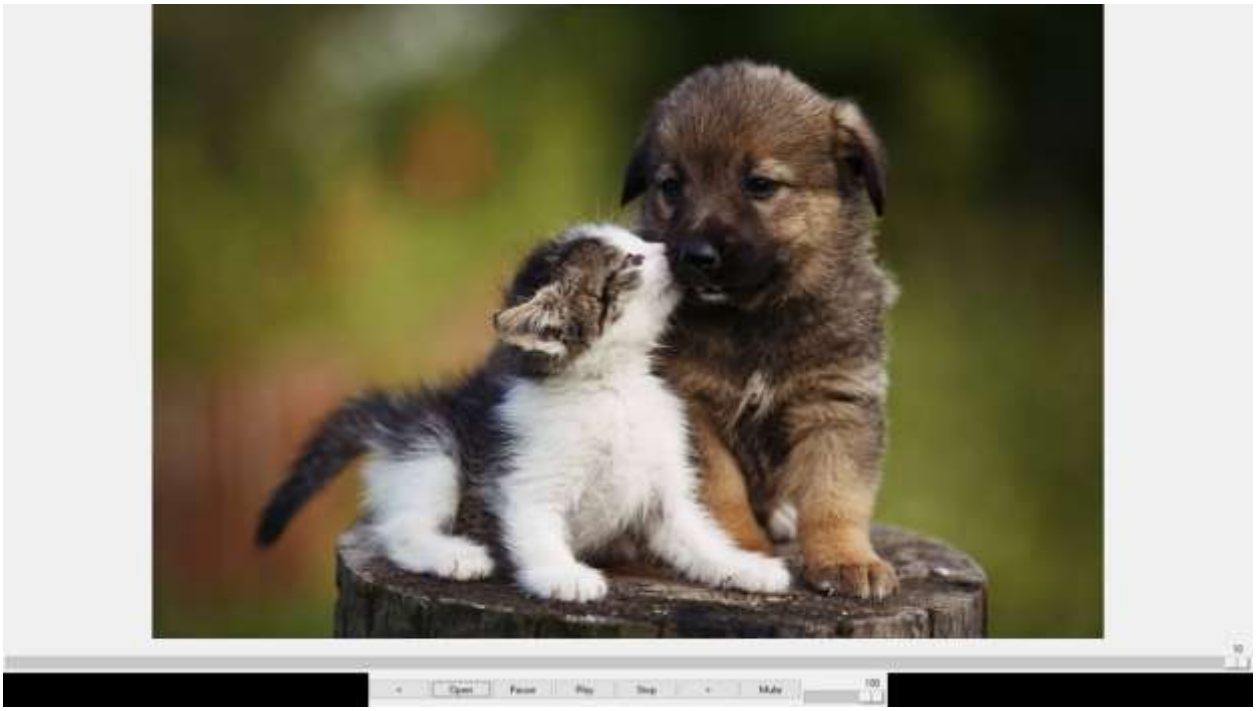
1.2.1 Python and ML libraries

1.2.2 PyCharm and Jupyter Notebook

1.2.3 Numpy, Scipy.

1.2.4 OpenCV





2. LITERATURE REVIEW

2.1Existing System

Media Viewer is one of the important features of the mobile. Currently for maximum number of the available media viewers it does not support all media format while audio effects are not available to some of the best current media viewers. While playing any video file if we want to perform some

work like checking the emails or sending some messages we cannot minimize it we have to pause/stop the playing file and perform the work. Also current media viewers have limitations in subtitle support. In current media viewer all subtitle formats are not supported. In current player one of the major drawbacks is that it has some limitations related to video quality compatibility as well as format support. High quality HD videos face some problem during video streaming. Performance of the media viewer is enhanced in this case by using software encoding facility.

2.2Proposed System

After considering all the above problems, we have decided to implement desktop like media viewer by using software development and media framework approach.

A. User Interface : Proposed system will provide improved user interface along with single station for pictures and videos. Single station pictures and video gives direct video tabs which leads to separate options for videos and pictures. The switching of picture to video and vice versa is carried out using just one selection operation like swapping window or clicking button.

B. Multiple Format Support : Proposed system will support multiple formats like 3gp, mp4.

C. Sound Effects : Current media viewer do not provide any type of sound effects which does not allow user to enrich multimedia experience. The proposed system eliminate above problem by using audio effects like equalizer, FX booster which will give more entertaining music experience.

D. Dual Audio Support : Dual audio facility allow user to select playback audio language during video streaming. This feature eliminate the language understanding barrier .

E. Run In Background : The most unique feature which we will be going to provide is the video running in background which makes the video playable in the widget. This feature allows user to do important works like email checking or sending message or data without minimizing or closing our video.

The media player consider about improving functionality in terms of user interface, format support through the inclusion of codec. Improvement in user experience through video running in background, dual-audio. This new media program shows pictures in bigger size, with helpful data about their substance, creators and related metadata. Preview larger images, enlarge images, Browse related files. for example, extend, download, share and install. Primary users for Media Viewer are readers, casual editors and other users include experienced editors, contributors.

2.1 Literature Review Summary

Table 2.1: Literature review summary

Year and citation	Purpose of study	Granularity Level	Type of vulnerabilities	Data set	Evaluation parameters
2015	The goal was to identify issues that were important to evaluate user satisfaction with Media Viewer	Is media viewer useful for viewing images.	To view the videos in Media viewer.	No Media Viewer containing the view of videos too.	Resemblance of the final output with the view of images and videos.

3. PROBLEM FORMULATION

Textures: User research suggests that the current file page brings up many issues for readers like too much information, cluttered visual layout, emphasizes text over images, longer load times and nowadays ,smartphones have become an essential source of entertainment, with the help of which people can entertain themselves, and along with that , they can stay connected with the world virtually.

But the main point is that there are several applications that we would have to install in our smartphones and they can get rid of our boredom along with taking help from any external application. A couple of years ago offline media, including movies and music was the only source of entertainment and in this era of OTT platforms, some people still prefer playing media on the smartphones that they have downloaded from torrent or any other platform and for this, it requires some special applications that can run all file forms.

Media Viewer is one such offline media viewer application that is considered as one of the best and must-have applications. Although the overall look and UI of this application might not be modern, the app is simple and easy to use. It offers you several unique features that we can't even get with various premium media player applications on the android. Also, we would be able to stream videos with the help of its URL only, along with that it offers the support of various video formats such as DVD ISOs and many more.

There is the support of additional plugins also that can enhance the overall user experience of this media viewer application.

- This media viewer has the compatibility of playing most types of files, along with that, it supports several codecs that enhance its compatibility.
- It has the support of almost every android version, which states that you would be able to play nearly every kind of media format on any android device.
- You would be able to stream online files also and that too directly with the help of their URL. This is an exceptional feature that most of the premium media viewer doesn't even have.
- It is an extremely convenient and effective media viewer that you will ever use in your android smartphone.
- Media Viewer offers a practical solution for readers, by making it easier to:

  - preview larger images
  - enlarge images
  - browse related files

- read image captions
- see a short summary

Moreover as a developer, why do we use foreign media viewer for viewing my files? Why shouldn’t we use my own developed media viewer. So as a developer it’s our responsibility to create this media viewer for providing people a cool media viewer application that supports and view every type of media which includes all types of images and videos.

4.OBJECTIVES

The convenience of Media viewer is that it improves the viewing experience for reader and make it easier to preview and browse images, provide a quick summary, with easy access to details, offer features such as enlarge, download, share and install. Media Viewer was created for readers and casual editors, the primary target users for this tool. Over time, these features can encourage them to contribute more to Wikipedia and Wikimedia sister projects. Media Viewer was tested extensively during development, through usability studies, community consultations and online surveys.

We aim to support all these user groups, with an initial focus on readers in our first release. See user stories below for each user group.

Reader stories

- view larger images
- find basic information
- browse related images
- share a link to this file
- use a simple, uncluttered interface
- view images on the same page (not another site)
- get back to the article easily

Casual editor stories

- find more information
- see original images
- use this file in an article
- download this file
- view license terms
- view/edit file page details

Experienced editor stories

- check meta-data
- see license terms
- copy attributions
- view all the file details
- edit file information

Feature development has now ended for this version of Media Viewer. In future versions, the multimedia team will consider adding more features requested by our community, such as a better zoom tool, a Mobile Media Viewer and/or support for more file formats (e.g. slides, video, audio).

5.METHODOLOGY

The following methodology will be followed to achieve the objectives defined for proposed research work:

a. Detailed study of Machine Learning libraries, OpenCV and Python language from which we will be able to make an application of viewing the photos and videos so that we cannot use another app for photos and videos.

b. We must install python 2.7 and on that we will be implementing the code and we will be using different libraries like numpy, scipy, scikit images, chumpy, OpenCV, tenserflow, ipdb and matplotlib. Hands on experience on viewing the photos and videos will be done with the help of these libraries.

c. Since the predicted meshes occur in different local media viewers but the changing features or the new improvements are an easier way to enlarge images, a more prominent button linking to the File page, image captions right below the image, clearer icons for Download and Share, an easier way to disable the tool for personal use, a way to re-enable Media Viewer.

d. While there are many apps to view the images and photos but our goal is to improve the viewing experience for readers and make it easier to preview and browse images and another feature of Media Viewer is that to disable Media Viewer, click on the 'cogs' icon at the top right corner of Media Viewer (see screenshot). Then click on "Disable Media Viewer." From now on, images will no longer open in Media Viewer: clicking on thumbnails will take you to the file description page on Wikimedia Commons or other file repository. This Disable feature works for registered users (using a site preference), as well as unregistered.

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6. RESULTS AND DISCUSSION

Nowadays, smartphones have become an essential source of entertainment, with the help of which people can entertain themselves, and along with that, they can stay connected with the world virtually. Media Viewer is one such offline media viewer application that is considered as one of the best and must-have applications.

Feature development has now ended for this version of Media Viewer. In future versions, the multimedia team will consider adding more features requested by our community, such as a better zoom tool, a Mobile Media Viewer and/or support for more file formats (e.g. slides, video, audio).

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