**📖 User Manual – Video Downloader & Frame Extractor**

**Version:** 1.0.0  
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**1. Overview**

The **video\_downloader\_extractor.py** is a command-line tool that:

1. **Downloads videos** from direct URLs or from multiple links listed in .txt files.
2. **Extracts frames** from videos in either **portrait** or **landscape** orientation.
3. Uses **colored output** and **progress bars** for better user experience.
4. Handles **network retries** and **resumable downloads** where possible.

**2. System Requirements**

**Operating System**

* Windows, macOS, or Linux

**Dependencies**

Python 3.7+ and the following packages:

pip install requests tqdm opencv-python

**3. Features**

* **Optimized Downloads:** Larger chunk sizes and persistent connections.
* **Robust Networking:** Retries for network failures.
* **Batch Downloads:** From .txt files with multiple video links.
* **Automatic File Naming:** Prevents overwriting existing files.
* **Multi-threaded Frame Extraction:** Faster OpenCV processing.
* **Orientation Control:** Portrait or landscape output.
* **Progress Indicators:** Visual feedback for both downloading and frame extraction.
* **Developer Branding:** Banner and contact info displayed at startup.

**4. How to Run**

1. **Save the script** as video\_downloader\_extractor.py
2. **Open Terminal/Command Prompt**.
3. Navigate to the folder containing the script:
4. cd path/to/script
5. Run the tool:
6. video\_downloader\_extractor.py
7. video\_downloader\_extractor.exe

**5. Main Menu**

After running, you’ll see:

📋 Main Menu:

1. Download Videos

2. Extract Frames from Videos

Q. Quit

Enter your choice (1/2/Q):

**6. Option 1 – Download Videos**

**6.1 Single Link Download**

* Select S for **Single Link Download**.
* Provide:
  1. **Video URL** (must be a direct download link).
  2. **Destination Folder** where the video will be saved.

Example:

Enter your choice (S/F/B): S

Enter the video link: https://example.com/video.mp4

Enter folder path to save the video: C:\Videos

The tool will:

* Download the video.
* Show a **progress bar**.
* Save it with the file name from the URL or downloaded\_video.mp4.

**6.2 Folder with TXT Files**

* Select F for **Folder with TXT Files**.
* Provide a **folder path** containing .txt files.
* Each .txt file should contain **one link per line**.

Example .txt file (videos.txt):

https://example.com/video1.mp4

https://example.com/video2.mp4

The tool will:

* Read all .txt files.
* Download each link.
* Name files uniquely to avoid overwriting.

**7. Option 2 – Extract Frames**

* Select 2 from the main menu.
* Provide:
  1. **Folder path** containing the videos.
  2. **Orientation**: portrait or landscape.

Example:

Enter path to folder containing videos: C:\Videos

Enter desired orientation (portrait or landscape): portrait

The tool will:

* Detect videos in the folder (.mp4, .avi, .mov, .mkv).
* Create an output folder per video.
* Extract every frame in order.
* Resize frames if orientation doesn’t match.
* Save frames as .jpg images with sequential numbering.

**8. Output Structure**

**Download Output**

C:\Videos

├── video1.mp4

├── video2.mp4

**Frame Extraction Output**

C:\Videos

├── video1.mp4

├── video1\

│ ├── video1\_00000.jpg

│ ├── video1\_00001.jpg

│ └── ...

**9. Error Handling**

* **No link provided** → Returns to menu.
* **No .txt files found** → Skips batch download.
* **Invalid orientation** → Cancels frame extraction.
* **Network errors** → Retries up to 5 times before failing.

**10. Tips & Best Practices**

* **Use Direct Links:** The tool won’t handle YouTube or streaming URLs. Use yt-dlp to get direct links if needed.
* **Check Storage:** Frame extraction can generate thousands of images.
* **Use SSD Storage:** For faster read/write operations when handling large files.
* **Batch Downloads:** Organize .txt files for large-scale downloads.

**11. License**

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**12. Contact**

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