The Definitive Guide: OSINT Investigations on Video Sharing Platforms

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Introduction

YouTube is an online video sharing and social media platform that was first launched in America in February 2005 and is currently owned by Google. YouTube is the second most visited website, with more than one billion monthly users who collectively watch more than one billion hours of videos each day. YouTube can be accessed via web browser, as well as mobile and TV applications.

The majority of content on YouTube is user-produced, with YouTube simply hosting the content for users to share and access globally. YouTube generates profit from a combination of ad revenue, from ads playing before videos, and paid videos, such as movies and exclusive content.

YouTube has had a substantial impact on society, influencing pop culture, internet trends, and creating celebrity influencers. YouTube has also been heavily criticized for facilitating the spread of misinformation, copyright issues, user privacy violation, censorship, and child endangerment.

Using YouTube, investigators can find videos posted by their subjects and can locate videos capturing events, such as crimes, accidents, and protests. YouTube videos can be used to support subject profiles and threat assessments, enabling investigators to view events as they happened.

YouTube is a vital source for Open Source Intelligence (OSINT) investigations, enabling access to
video content from around the world. In this guide, we have unpacked the YouTube platform for you and have highlighted steps, tricks, and tips to get you collecting information from YouTube in no time.

This guide will show you how to conduct OSINT investigations using YouTube. We’ll discuss locating content and extracting content, showing you how to get the most value from YouTube for your OSINT investigations.

Locating Content
YouTube accounts and videos all have dedicated pages that can be easily accessed through a web browser or through a mobile app. YouTube does not require users to have an account to access profile or video content on their platform.

YouTube has inbuilt search functionality that enables users to search by keywords and phrases. Searching for Skopenow within YouTube’s search bar brings back videos that feature Skopenow within the description and the Skopenow channel.

YouTube also indexes its pages, which enables investigators to utilize search engines to locate YouTube content. To locate this content, you should utilize the ‘site:’ operator by searching for site:www.youtube.com. The ‘site:’ operator removes pages from any other website from the search results.

From these results, you might notice that within these search results are trends for specific web pages in YouTube, including the terms /channel/ and /user/ in their URLs. Below are a few examples from the first few pages of Google:

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Channel (Also sometimes seen as C):

https://www.youtube.com/channel/UC0yY6a79pPY9J0ShIHRf6yw  

**DjangoCon US - YouTube**
Six days of talks, sprints, and tutorials by the community for the community.

https://www.youtube.com/c/blippi  

**Blippi - Educational Videos for Kids - YouTube**
It's a good thing Bill Brushy is on the case and with his toothpaste and bristles he shows Blippi just how to get the perfect clean! For more Blippi videos and ...

User:

https://www.youtube.com/user/binghamtonuniversity  

**BinghamtonUniversity - YouTube**
BINGHAMTON has earned a reputation as the premier public university in the Northeast because of its exceptional, innovative academic programs, ...

Adding keywords or phrases in quotation marks following the site operator will limit results to only those containing your specified phrase. Searching [site:www.youtube.com "Steve Adams" AND "OSINT"], shows only YouTube results that contain both the keyword OSINT and the name Steve Adams. Queries like this will enable you to locate YouTube videos that contain specific keywords in their descriptions and titles.
Altering the website following the site command can help us to limit our results further still. By searching `site:www.youtube.com/channel/`, results will be limited to only YouTube channel pages, removing videos from the results.

YouTube channel pages are automatically indexed, however, results are based on the account’s total number of subscribers and the total number of views. When searching for account names, if the account is infrequently used then you may not get back results for existing channels when using search engines.

Using the search string `site:www.youtube.com/channel/ "Intelligence with Steve"` doesn’t bring back the Intelligence with Steve channel.

Similarly, the search string `site:www.youtube.com/channel/ "Skopenow"` doesn’t bring back the Skopenow channel but does bring back videos that mention the Skopenow brand.
However, searching for a popular and frequently used channel, site:youtube.com/channel/"Facebook App", brings back results that include a link to the correct channel.

Searching by Keywords

Outside of the YouTube platform and search engines, YouTube content can also be searched for by using third-party sites.
Aware Online utilizes URL manipulation to enable users to search for keywords within the platform, videos, channels, playlists, and more. Using the Aware Online YouTube tool, you can easily search for YouTube content.

Another third-party keyword searching tool, the OSINT Toolkit, enables you to search using the same URL manipulation methodology, although occasionally replies on different URL variations.

Alternatively, you can manually manipulate the same URLs to search for content. To use the URLs below, simply change the text in red to your keyword. Any spaces in a search phrase can be represented as either a + symbol or using %20.
General Search:
https://www.youtube.com/results?search_query=Skopenow

Keyword Search:
https://www.youtube.com/results?search_query=%22Skopenow%22

Video Search:
https://www.youtube.com/results?search_query=Skopenow&sp=EgIQAQ%253D%253D

Live Video Search:
https://www.youtube.com/results?search_query=Skopenow&sp=EgJAAQ%253D%253D

Channel Search:
https://www.youtube.com/results?search_query=Skopenow&sp=EgIAQg%253D%253D

Playlist Search:
https://www.youtube.com/results?search_query=Skopenow&sp=EgIQAw%253D%253D

Movie Search:
https://www.youtube.com/results?search_query=Skopenow&sp=EgIQAQ%253D%253D

TV Program Search:
https://www.youtube.com/results?search_query=Skopenow&sp=EgIQBQ%253D%253D

Order Search by Upload Date:
https://www.youtube.com/results?search_query=Skopenow&sp=CAI%253D

Searching by Location
YouTube content can also be searched for by location, enabling investigators to locate content that was taken at a specific location. Searching for content by location can be a great way to source videos taken of crimes like theft or violent incidents. Identifying a video taken at the correct place and time could enable an investigator to view the suspect.

YouTube Geofind enables investigators to enter an address or find a location on the map at the top of the page to search for content posted within a specific radius of the entered location. The radius can be selected from a drop-down list, ranging from 1km to 1000km.

Investigators can enter specific keywords for video results to include and results can be filtered and limited by date, enabling content to be located for a specific timeframe.
Results for the specified criteria will populate at the bottom of the page. The map will also update to show the tagged location of the results.
Extracting Content

Extracting Metadata

**YouTube Metadata** enables investigators to extract the available metadata from a YouTube video, playlist, or channel. Simply copy any YouTube video, playlist, or channel URL, such as https://www.youtube.com/watch?v=j9tBHSfLJA, and paste it into the data entry field at the top of the page.

Below, results will populate including view count, comment count, geolocation tags, duration, channel details, and thumbnails.

An alternative to YouTube Metadata is **Youtube DataViewer**, a tool from Amnesty International.

The Youtube DataViewer is another tool to extract hidden metadata from videos hosted on YouTube. It allows you to extract the video upload time, helping to determine which copy of a video was uploaded first, and the video thumbnails, which can be used to conduct a reverse image search to find older versions of the same video.

Simply copy any YouTube video, playlist, or channel URL, such as https://www.youtube.com/watch?v=BOT8IVGPEC0, and paste it into the data entry field at the top of the page.
Identifying Misinformation

The InVID Verification Plugin is another tool that provides similar data to the Metadata extraction tools. The InVID plugin is built specifically to assist journalists in verifying content on social networks and identifying misinformation.

The plugin enables investigators and journalists to get contextual information from Facebook and YouTube videos, perform reverse image searches on search engines, and fragment videos into keyframes.

The InVID plugin can be downloaded for Chrome from the Chrome store. Once downloaded, the tool will appear in the extensions bar at the top right-hand corner of the Chrome browser.

The InVID plugin can be downloaded to use on the Firefox browser.

Once installed, click on the tool extension and a drop-down box will appear. Click ‘OPEN TOOLBOX’ to open the InVID verification plugin.
The Toolbox will open within a new browser window. The InVID Verification Plugin has 4 tabs, Video, Image, Search, and Data Analysis. Video, the first tab, is the one necessary for analyzing YouTube videos.

Within the Video tab, there are 5 tools; video analysis, keyframe, thumbnails, metadata, and video rights.

The Video analysis tool enables users to view key metadata and thumbnails. To use this tool, click on the Video analysis button.

Once the Video analysis tool opens, you can enter a YouTube video URL into the data entry field under ‘Source of the video’. Following this, click the Submit button.
The Video analysis tool will then analyze the input YouTube video, which may take a few minutes. The results of the analysis will populate further down the page.

Below the metadata, you can find thumbnails from the video. These thumbnails can be reverse image searched on search engines by clicking one of the search engine buttons below the images.
Downloading Videos

YouTube does not allow users to download videos from within its platform, however, several third-party websites enable investigators to download YouTube content to their device. Adding some javascript code to a browser bookmark, you can quickly create a dynamic URL that will take you to one of these platforms to download any YouTube video.

Firstly, copy the following text:

```javascript
function downloadVideo() {
    if (location.host === 'youtube4kdownloader.com') {
        return;
    }
    document.location.href = 'https://youtube4kdownloader.com/download/video/' + encodeURIComponent(encodeURIComponent(document.location.href));
}
downloadVideo()
```

Go to your web browser and open up the Bookmark Manager.
Next, click to add a new bookmark, enter the copied javascript code into the URL field and give it an appropriate name, such as YouTube Downloader. Click save to add the bookmark to your bookmark list.

Add bookmark

Name
YouTube Downloader

URL
javascript:function%20downloadVideo()%7Bif(location.host%3D%3D%27...

You can now go to any YouTube video URL and click the newly created bookmark, which will direct you to a youtube4kdownloader.com page for the specified video. From the page, you can download the video in a range of quality resolutions by clicking the green Download button.

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Extracting Video Transcripts

The YouTube platform automatically creates a transcript for every video uploaded onto the platform. To view the transcript, click on the three horizontal dots below the video and select the ‘Open transcript’ button. The transcript will then open on the right-hand side of the video.

To extract the transcript, you can utilize the Instant Data Scraper chrome extension. Add the extension to your Chrome browser and click on the button from your extensions list.

A new sub-window will open for the Instant Data Scraper tool.
Click the ‘Try another table button’ and then click onto the transcript table on the main YouTube window. The transcript table will be highlighted in yellow and surrounded by a red box, which means that the Instant Data Scraper tool is extracting text from that table.

Return to the Instant Data Scraper window and click the Infinite Scroll button. Finally, click Start crawling, which will ensure all of the loaded text is captured.
Collaborating on Analysis

**Meedan Montage** is a tool that enables teams to collaborate on the analysis of YouTube content. Signing in with a Google account, users are able to create projects that they can share with other Google account holders, enabling teams to work on video analysis together within one platform.
Once permissions have been agreed for a Google account, you will be automatically redirected to Meedan Montage. To start collaborative analysis, click the orange + button to create a project.

You will then be redirected to a new page where you can give your project a name, description, and image. Click the save button once this data has been entered to save the project and access it.

Once you are in a project, you can then search for YouTube content to add to the project. Click the magnifying glass button in the top right-hand corner of the page or the orange button to open a search box, where you can enter a search term.
Enter your search term, which will then bring back corresponding YouTube videos.

Within the results table, clicking on the plus symbol on the far right-hand side of each video will add that video to your project. You can then view the added videos in your content list.
Clicking on the title of any of the videos that were added to the project will open up the video for analysis. Here, you can view the video, see the view count and published date, add project tags, and set geographical locations.

To add a tag, click on the ‘Add tag’ button on the bottom left side of the screen, below the video. You can manually type any word or phrase as a tag. Using the same tag on multiple videos will group them in the tabs section of the project.

Returning to the main project page, you can access all of the tags used within all of the videos within the project by clicking on the tab with a tag symbol. Each tag will show all of the thumbnails in each video that have been tagged with that word or phrase.
Within each video in the project, you can also set a geographical location that you want to assign to the video, such as a location you believe the video was filmed at. Other team members can move the set location as analysis improves the understanding of the contents.

Returning to the main project page, you can access all of the locations set within all of the videos in the project by clicking on the tab with a location symbol. Each video will appear on the map in the location that it was set.
Analyzing Comments

Windows and Linux users can use YouTube Comment Suite to aggregate YouTube comments from numerous videos, playlists, and channels for archiving, general search, and showing activity.

To install on Windows, locate the Install section and click the black and green button.

Within the latest version, locate the zip file in the Assets section and download it to your device.

Finally, extract the zip file and run `youtube-comment-suite-#.#.#.jar`.

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You can then use the YouTube Comment Suite tool to analyze YouTube videos, playlists, and channels. Using the tool you can:

- Search for comments by video, type, username, keyword, length, and date.
- Detect a keyword in comments.
- Determine the frequency of a keyword.
- Determine frequent commenters.
- View a user’s comment history over an entire channel.
- Display stats about videos, including; published videos per week, most popular, most disliked, and most commented.
- Export search results to JSON format.

Automating your Investigations on Video-Sharing Platforms

Using a tool like Skopenow, you can automate the processes outlined in this guide to extract and analyze content from video-sharing platforms. Skopenow instantly and anonymously locates and archives social media accounts and posts, plots location history, flags actionable behaviors, and reveals hidden connections between individuals. Skopenow’s automatic report builder will save you time organizing the analyzed intelligence into a court-ready report. Please reach out to sales@skopenow.com or visit www.skopenow.com/demo to schedule a demo and activate a 7-day free trial for qualified businesses.
WHO WE ARE.

FAQ

What is Skopenow?

Skopenow is a cloud-based search engine that uses public data to build analytical reports on people and businesses. We also provide an API and batch services.

Does Skopenow work overseas?

Yes. We are currently in North America, Europe, Asia, and Australia.

What do your reports include?

Social media content, surface web, deep web, dark web, consumer information, litigation history, heat maps, and relationship analytics. Meta and hash data is available for every piece of content.

How is Skopenow priced?

We are a SaaS business that charges by the total number of seats and search volume.

What kind of turn around do reports have?

Our reports are automated so the turnaround time is only a few seconds.

TRY US OUT

Visit Skopenow.com/try and sign up for our free 7-day pilot.

ABOUT

Skopenow was born in NYC on a sunny May afternoon in 2016. We provide fraud and threat intelligence to some of the largest organizations in the world. We are a venture backed Techstars company delivering actionable insight to over 20,000 users and 1,500 enterprise customers. Skopenow also works directly with many state and federal law enforcement agencies across the globe.

IMPORTANT FEATURES

Forensically Hashed Court Ready Reports
Social Media Text, Image, and Video Collections
Face Match
Consumer Record Identity Resolution
Dark Web to Surface Web Username Reconciliation
AI-Based Behavior and Object Recognition
Automated and Tailored Alerts
Collect in Anonymity

WHO USES SKOPENOW

Federal Law Enforcement
State and Local Police
Government Agencies
Attorneys
Global Security Teams
Private Investigators
Journalists

GET IN TOUCH

Feel free to call us at (800) 252-1437 or email us at info@skopenow.com. You can also live chat with a Skopenow team member for support and sales related questions.

Customer support is available from 9AM-6PM EST.