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Comparative Analysis of Tineye and Google Reverse Image Search Engines

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Abstract:- Daily on the web, huge amount of photos are there and it is difficult for us to locate authorized image. To find out the origin of a picture, an image search engine, which is an excellent tool, helps us. Searching can be based on similar pictures, keywords or links to an image which help to find deliberate images from different pictures warehouse. Image retrieval is the technique of retrieving, looking, and browsing the pictures from a data ware house. Search engines allow us to understand pick images and the background in which they are placed. At the same time, it is difficult for search engines to transliterate user's search results by keywords and this develops into ambiguous which is removed from acceptable. So it is necessary to use a primary-based fulfilled search to clear up the inconsistency in image retrieval. This is very helpful and an excellent utensil for those who are in digital marketing to see, if any using photo changes without permission. If there's any copyright violation, we can address the matter. This paper discusses the idea and functioning of image search engines. From well-liked search engines, we have chosen images for presentation and diagnosis of the results. In this paper, two image search engines tineye and google reverse image search, officially called google search, were evaluated on the basis of their search capabilities and response time; Google chrome was used as the web browser for the study.

Keywords:- *Reverse Image Search, Transliterate, Image Retrieval.*

I. INTRODUCTION

Search engines, as it go on to browse, find index and store information on specific image. The main motive of image search engines is to upload or paste an image in the URL and it searches for it to find that same image across the web. Searching goes thought textual description of the image given by user or content associated with a selected sample image. Sometimes it finds assigned images and results as a bunch of images. Now at this situation various dimensions measures such as quality of an image, color, discover, manipulated versions, shape, trimmed and edited parts are used for comparing the images.

The first image identification technology was used by Tineye, to operate if a picture was changed, modified, or resized from its original state [2]. It quickly finds copyright violations and detects image fraud. We cannot upload bulk images; it could slow down the system choosing one at a time. The negative thing about the search results is that the images can have little in common with the original. Tineye found images used with other images of the exact same composition of the selected image and it provided the same approach for many years. In my opinion, they have motorized up their corresponding algorithm [4].

Google search engines do its best to identify what is the subject of an image. Searching splits between three sections: what the algorithm thinks is in the photo; visually similar images results, and pages that include identical images. For many decades, Google search for image information was done by using query keyword. Google uses algorithms for attributes like form, size, and color to induce similar footage in images [4]. Google uses this to match input images to alternative images within the Google images index and additional image collections [5].

➢ *Objective of the study*

- To look over the productivity of image search engines.
- To observe the applicability of the results for the input images.

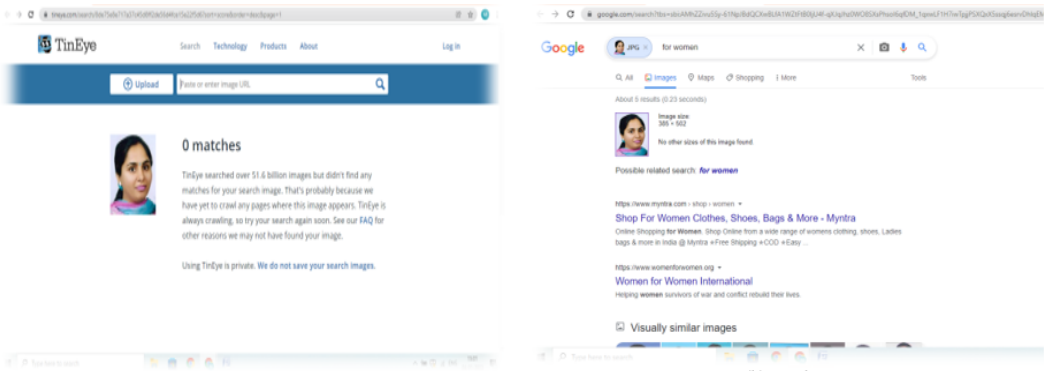
➢ *Related work*

All search engines access images on textual-based or keyword-based. The difficulties encountered in keyword-based image search engines can be overcome with content-based image retrieval, which was proposed in 1990 and is employed to produce a much more relevant output [1]. Xiaogang Wang, Xiaoou Tang and Bo Luo in 2003 discussed the practicable approach for WWW-based image retrieval [1]. Pushpa M.,Chutel, Apeksha and Sakhare in 2014 discussed the various methods for the image retrieval and problems in retrieval of exact images [3].

➢ *Procedure*

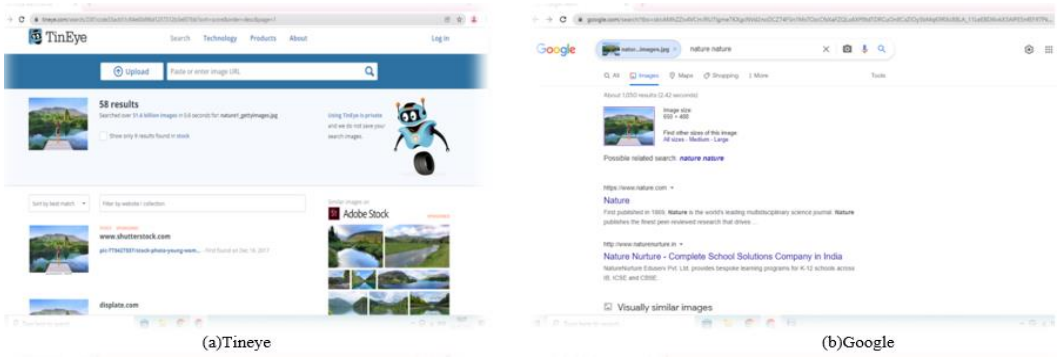
For this work, we have included three images in google and tineye, to check the accuracy, accomplishment, and efficiency of the search engines. Upload or paste a link of an image from the computer / through a website within the

search bar itself. We can also drag and drop a picture into the search box.



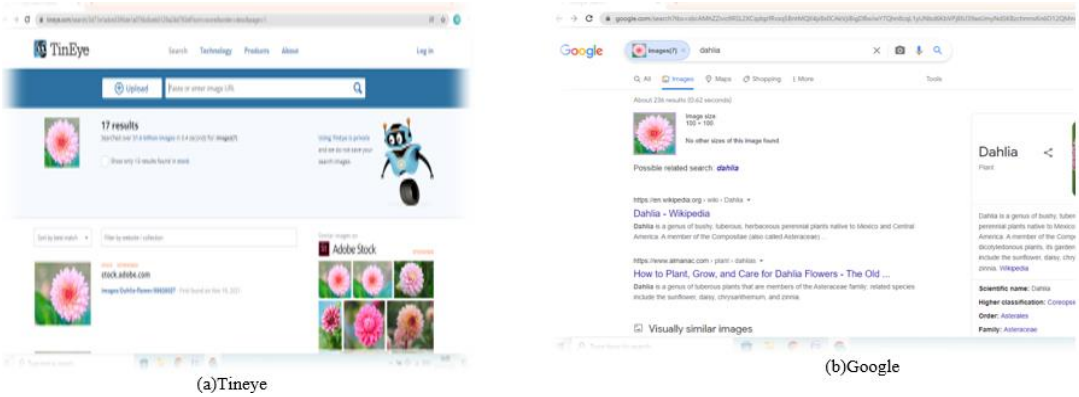
(a)Tineye (b)Google

Fig.1. Image1-Lady



(a)Tineye (b)Google

Fig.2. Image2- Flower



(a)Tineye (b)Google

Fig.3.Image3-Nature

Above are snapshots of the different three images. The left side shows the images in Tineye and the right side shows it in Google search engine.

Results to our surprise, what we have found that the problem with tineye is the limited number of pages that it searches and provides in the results. Google reverse search engine searches all pages, or at least more than once.

Table 1. Comparison of tineye and google image search on basis of response time and results

Image(Stored locally on PC)	Google		Tineye	
	Results	Time(in seconds)	Results	Time(in seconds)
Image 1-Lady	5	0.23	0	0
Image 2-Flower	236	0.62	17	0.4
Image 3-Nature	1,050	2.42	58	0.6

For image1-Lady, tineye returned 0 results, and for the same image in google returned 5 results with a response time for this was 0.23 seconds. For the image2-Flower, tineye offered only 17 results over 51.6 billion images in 0.4 seconds and google returned a total of 236 results in 0.62 seconds. For image3-Nature, tineye offered only 58 results in 0.6 seconds and google returned a total of 1,050 results in 2.42 seconds. So google reverse search engine is fast and very vast in giving results as compared to tineye.

Both search engines have their own pros and cons; Google is very versatile and fast in giving results [6]. But it lacks some features that are offered by tineye. But for Google, this is just the beginning, and we think Google will go a long way in this field with new innovation.

Table 2. Comparison of google and tineye

Parameters of comparison	**Google**	**Tineye**
Speed	Fast	Slow
Amount of Images Retrieved	Very Vast	Limited
Ability To Compare Results	No	Yes

II. CONCLUSION

In my study, I found that Google is the largest image information provider and supported innovation with numerous attributes to retrieval of similar pictures. A Google reverse search engine is economical, extraordinarily fast, and accurate in the results generating for this paper, as i have discussed.

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