

DIFFERENT KINDS OF SEO TECHNIQUES

Dr. Vijay Kumar Samyal*1, Adarsh Pandey*2, Ahsanulhak*3, Shashank Singh Chauhan*4

*1Associate Professor, Department Of Computer Science Engineering, Malout Institute Of Management And Information And Technology, Malout, Punjab, India.

*2,3,4Students, Department Of Computer Science And Engineering, Malout Institute Of Management And Information Technology, Malout, Punjab, India.

ABSTRACT

Search engines play an important role in e-marketing in modern scenarios. Search engines provide search results. Display the results as a list. The ultimate goal of search engines is to optimize search results. Search engines optimize search results according to relevance. Search engines assign a rank to a particular web page depending on various factors such as keywords, link popularity, etc. Different strategies for search engines such as on-page and off-page Search engine optimization (SEO) can be considered to gain relevance of search results. This white paper examines known techniques for search engines to optimize search results. It also provides insight into various types of Search Engine Optimization (SEO) algorithms such as Penguin, Panda, etc. A comparative study of his SEO methods on time, cost and legal aspects is presented in our work. I'm also trying to find a new dimension of research on SEO.

Keywords: SEO, White-Hat SEO, Black-Hat SEO, Gray-Hat SEO, On-Page SEO, Off-Page SEO.

I. INTRODUCTION

Search engines play an important role in retrieving information from the Internet, providing relevant and relevant information and results to users. A search engine consists of hunters, indexers, searchers, and users. Getting information quickly and purposefully requires an accurate and powerful search engine. Search engines perform five basic operations to provide search results. Crawling is the first activity by which a search engine, crawler or spider retrieves all web pages associated with her website. Indexing is the next activity of search engines. All retrieved web pages are indexed and stored in a large database for later retrieval. When you search for something on a search engine such as Google or Yahoo, your search string is compared to indexed pages in their database. After this process, search engines calculate the relevance of each page according to the search string. The final operation of a search engine is to get the best match. Search engines only measure quality and errors, they don't observe them directly. By function, there are three types of search engines. They are crawler-based search engines, human-powered directories, and hybrid search engines. When you search for information or keywords in a search engine, the search engine will return the most relevant information according to the keywords in the list Search engine results usually show the top few pages. Search engines usually measure page quality by calculating page rank. Many website promotion techniques are used to rank higher in search engine results. Search engine optimization (SEO) is the process by which a website ranks higher in natural search engine results and increases traffic [10]. Search engine optimization (SEO) is an important part of internet marketing. Website developers use SEO to make their websites rank higher in search engine results. An important benefit of SEO is making your website easy to understand with good content. First of all, effective SEO takes a lot of time, choosing the right keywords, and continuously updating search engine algorithms. necessary monitoring, etc. Each search engine has a relevance algorithm, and this algorithm is updated regularly. Search engine rankings are changed and relevance algorithms are updated. Search engines such as Google rank websites based on the quality and maximum bids given to keywords [9]. Search engine optimization depends on a number of factors, which he categorizes into two types: on-page SEO and off-page SEO. On-page SEO involves choosing the right keywords, placing keywords in the right positions, external links, keyword density, and more.

II. METHODOLOGY

White Hat SEO:

SEO tactics that have the following characteristics are considered white hat.

- Conforms to search engine guidelines.

- Deception is not included.
- We ensure that the content that search engines index and rank is the same as his content that the user sees
- Ensure that website content is created for users, not just search engines.
- Ensures the quality of web pages.
- Make useful content available on your website

Black Hat SEO:

SEO is considered Black Hat or Spamdexing if it exhibits the following characteristics.

- Redirects users from pages designed for search engines to his more human-friendly page.
- Redirect the user to a different page than his search engine page.
- Provides one version of his page for search engine spiders/bots and another version for his visitors who are human. This is called cloaking SEO tactics.
- Use invisible or invisible text, use page background colors, use small font sizes, or hide them in HTML code such as "No Frames" Section.
- Repetition of keywords in meta tags and use of keywords that are not related to the content of the website. This is called meta tag stuffing.
- Calculated placement of keywords within a page to increase the number, diversity and density of keywords on a page. This is called keyword stuffing.
- Create low-quality web pages with little content, instead v chock full of keywords and phrases. These pages are gateway or gateway pages.
- Host multiple websites and mirror websites – All have conceptually similar content, but have different URLs.
- Creates fake copies of popular websites and presents web crawlers with content similar to the original, but redirects web surfers to unrelated or malicious websites. This is known as a page hijack.

Gray Hat SEO:

Embmaster uses an unrelated technique known as Gray Hat SEO technique to optimize their website. It's easy to say that optimizers can buy or exchange links with other websites to improve search engine rankings, but is not accepted by search engines. Search engine ranking cannot be maintained.

SERP:

Search Engine Results Page. A web page that a search engine returns with the results of a search. Major search engines usually display 3 different listing in SERPs. Listings that have been indexed by search engine spiders; listings that have been indexed by search engine indexes by humans, and listings that have been paid by search engines to be listed.

Google SEO Tools:

SEO Research Central Google tools for SEO campaigns. These tools include Google Webmaster Tools, Google Ad Words, Google Trends, and Google Ad Planner. Google's webmasters tool help webmasters better control how Google interacts with their websites and to obtain useful information from Google about websites. Webmaster tools cannot identify issue that may improve your site's performance in search result. With service webmaster can.

- See which parts of a site Googlebot had problems crawling.
- Upload an XML Sitemap file.
- Analyze and generate robots.txt files.
- Remove URLs already crawled by Googlebot.
- Specify the preferred domain.
- Identifies issues with title and description meta tags.

Google Analytics Tools:

After using Google Webmaster Tool to improve crawling and indexing on, search to see his inbound traffic to the site. Google Analytics gives deep insight into: • helps you discover the most popular content on your site. • helps you measure the impact of optimizations you've made on your website.

III. GOOGLE ALGORITHM

You need search engine algorithms to increase your page rank. This helps search engine optimizers find new factors that improve your website's ranking, or discover new search engine rules that are important for your website's ranking. Here are some important Google algorithms. This is Google Penguin is Google's algorithm.

Google released Google Penguin on April 24, 2012. The main purpose of Google Penguin was to downgrade websites that did not comply with Google's guidelines. This algorithm is designed for black hat SEO techniques that do not follow search engine rules and regulations [1]. Google Penguin's algorithm is based on backlink quality [2]. Measure the number of backlinks and check the quality of your backlinks. Google Penguin ranks websites by the number of quality backlinks. Websites rank higher when they contain the maximum number of quality backlinks.

- a) The website does not contain excessive and unnatural links.
- b) The website does not use keyword stuffing, invisible text and lead-in pages (black-hat SEO) techniques, or cloaking techniques.
- c) Websites must have high quality backlinks.

Google Panda was first released in February 2011. This algorithm is designed to change your ranking in Google search results. The main goal of Google Panda is to increase the ranking of high-quality websites even with low quality websites. Affected are blog and his website with duplicate content [4]. When Google Panda was introduced, scrapers and other copyright-filled sites ranked higher in Google search results than sites with original content. At one point, Google asked for help running a scraper. Google then updated his Google Panda in April 2011.

Google Panda is a web content-based algorithm. Google Panda penalizes these types of his websites with low quality content. H. Your website ranks poorly. Sites with low quality backlinks will not be penalized. A website may be ranked higher by Panda if:

- a) Website information must be reliable.
- b) The information was written by an expert.
- c) Advertisement display on website is limited.
- d) The website content must be error-free and the website must be clearly defined.
- e) The website is real-time and easy to use.

Google Panda builds on its strengths in web content. Web content strength falls into his three categories: thin content, low quality content and duplicate content. A web page is said to have thin content if the content of the web page is not very useful for the user. If the author copies every line from another website, it is called low quality content. Her web page is said to be a reproduction if all information is copied from another of her web sites or her web page[11]. The Hummingbird Algorithm is an algorithm that combines existing algorithmic techniques with new technologies. It was launched on September 26, 2013. The name "**Hummingbird**" comes from the speed and accuracy of a small bird. A good website with good content, more accurate backlinks, and the right keywords in the right position will rank higher in this algorithm. To make Google better, even if you pick specific keywords from your question, Hummingbird aimed to answer the right types of questions that are relevant to you. Introducing long tail keyword offerings. An algorithm based on machine learning was introduced on October 26, 2015. This algorithm is known as the Rank Brain algorithm[12].

This is part of the Google Hummingbird Algorithm. The Rank Brain algorithm helps Google understand user queries and provide the best matching results. Google introduced this algorithm due to lack of query-specific features and shallow content. According to this algorithm, websites are likely to rank higher if their web content is optimized for relevance and made comprehensive with the help of competitive analysis [3]. There are some updates to the Google Algorithm in response to new requirements. Some of these are listed below.

- a) Phantom Update
- b) Panda Dance
- c) Pigeon
- d) Opossum
- e) Fred

When Google Panda was introduced, scrapers and other copyright-filled sites ranked higher in Google search results than sites with original content. At one point, Google asked for help running a scraper. Google then

updated Google Panda in April 2011. Google Panda is a web content-based algorithm. Google Panda will penalize types of websites with low quality content. Your site ranks down[14].

IV. DIFFERENT FACTORS

a) Web content sharing: Web content sharing is a valid factor. Share website content with social media such as Facebook, Twitter and Google+. This technique helps drive additional traffic. For example, Facebook offers the possibility to create additional pages for social media. When users share this page, your site's conversion rate increases. Social media provides an opportunity to get in touch with people who "follow" or "like" websites online [6].

b) Web Content Updates: The user is most interested in the content of her website and the user likes new web content. A content management system (CMS) is an important part of SEO. Used to store, manage and organize the content of our website. A Web Content Management System (WCMS) is also used to manage the structure of the website. New and great content on your website increases the number of visitors. Website developers should have content management tools for updating website content [7].

c) Mobile SEO: Today, the majority of users are using smartphones and using Android, iOS or Windows platforms. They access the internet through these types of smartphones. Some websites display correctly on PC but not on smartphones.

That's where mobile SEO comes in. Mobile SEO is the process of making your website more visually appealing on mobile devices. This is the key factor today. Mobile SEO can help you drive more traffic to your website[13]. A website will render well on mobile if it has the following characteristics:

1. Website content is easy to read without screen magnification.
2. Navigating the site on a small screen is easy.

Depending on how mobile-friendly the website is, it's usually based on ranking.

d) Page speed/load time: Some websites take a long time to load, which frustrates visitors. The solution to this problem is to design your website so that it loads quickly. The solution must be implemented by a website, use limited advertising, and the website must contain images in his GIF or PNG format with images of appropriate size [8]. The home page only shows 4-5 posts.

e) Competitor Analysis: Competitor analysis is now an important factor in promoting a website. Fired before the site starts working. Helps website developers understand techniques used by competitors. Using this technique, you can understand what your target keywords are and how to improve your backlinks [5].

V. RESULTS AND DISCUSSION

This study shows that search engine optimization is an essential process to increase the ranking of his website. You can implement different SEO techniques that you can use with different prospects. The techniques we have discussed so far are white hat SEO, black hat SEO, and gray hat SEO.

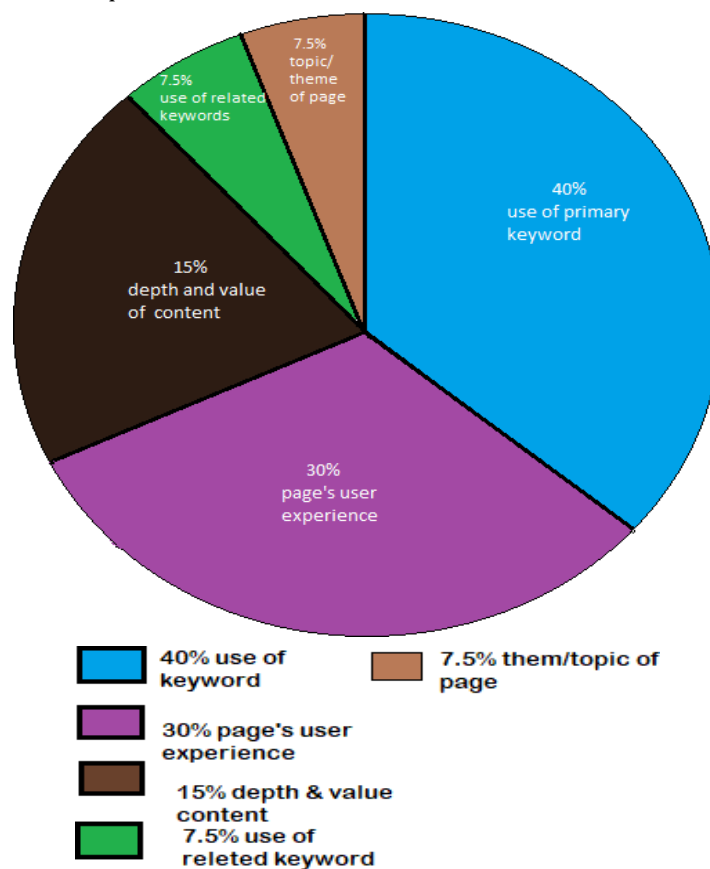
Table 1. Comparison of different SEO Techniques.

SEO Techniques	Time	Cost	Ethics aspects
White-hat SEO	More time than black hat and Gray-hat SEO.	High	Yes
Black-hat SEO	Take very less time than White-hat SEO	Less	No
Gray-hat SEO	Take less time than white-hat SEO but not Black-hat SEO	Less than white-hat	No

White Hat SEO follows search engine rules and regulations, implemented websites is not penalized by white hat SEO techniques. But black hat SEO is opposite of white hat SEO. We do not follow any search engine rules and regulations. Black Hat SEO gets penalized by search engines. So black Head SEO not for search engines or users. Because it doesn't provide quality content to users. Here we discussed another technique called gray hat SEO. Gray hat SEO is a combination of white hat SEO and black hat SEO Gray hat SEO is penalized by search engines because it includes black hat SEO techniques. This technique is not legitimate and does not provide long-

term relevant search engine results. Using white hat SEO on your website can take a long time to rank high in search results. Black hat SEO performs the same task, but takes less time than white hat SEO. Gray hat methods, on the other hand, will get your website to the top in less time than white hat SEO. Therefore, when it comes to ranking a website in the long run, we can say that white hat SEO techniques are the best technique compared to other techniques.

This article also discusses different types of his SEO concepts. H. On-page SEO and off-page SEO. On-page SEO depends on several factors such as keyword choice, keyword density, meta tag keywords, URL keywords, title tag keywords, and outbound links. Off-page SEO depends on the number of backlinks, the number of incoming calls. Link, link exchange. To improve your rank, you should pay attention to these factors. Search engines change their algorithms frequently, so you should pay attention not only to these factors, but also to other factors dealing with updating search engine algorithms. We discuss the following on-page SEO efforts. The table below defines the various techniques:



VI. CONCLUSION

Search engine optimization is primarily based on three approaches: white, black and gray hat SEO. The advantage of white hat SEO is that your website will rank longer in search engine results. The advantage of black hat SEO is that it is faster to display at the top. Black hat techniques are not recommended by developers as they will harm your website in the long run. Grey-Hat SEO turned out to be an interesting approach to ranking higher for his particular website. I tried to summarize the concepts and compare most of the types and techniques used by search engines today. This work concisely provides developers and researchers with relevant concepts on his SEO for future work. Developers and analysts can introduce new elements to get better search results to promote their website.

VII. REFERENCES

- [1] Researchgate.com
- [2] Patil Swati P, Pawar B.V. and Patil Ajay S. "Search Engine Optimization: Research" Research Journal of Computer and Information Technology Sciences. 1(1), 10-13, February (2013)

-
- [3] Naser Yarchun Yarchi, "Was ist such maschinenoptimierung: SEO?" Procedia Social and Behavioral Sciences 9 (2010) 487–493.
- [4] Meng Cui, Songyun Hu Forschung zur such maschinenoptimierung zur Website-Promotion" 2011 International Conference of Information Technology, Computer Engineering and Management Sciences.
- [5] Dr. Khanna Samrat Vivekan und Omprakash „KONZEPT DER SUCHMASCHINENOPTIMIERUNG IN WEB-SUCHMASCHINEN "International Journal of Advanced Engineering Research and Studies E-ISSN2249 – 8974.
- [6] Muhammad Akram, Imran Sohail, Sikandar Hayat, M. Imran Shafi and Umer Saeed "Search Engine Optimization Techniques in Practice in Organizations: A Study of Four Organizations" JOURNAL OF COMPUTING, VOLUME 2, ISSUE 6, June 2010, ISSN 2151-9617
- [7] Edgar Damian Ochoa "An analysis of the application of selected search engine optimization (SEO) techniques and the effectiveness of IHRE for GOOGLE's search ranking algorithm" Eine in Teilerfüllung der Voraussetzungen für den Grad Master of Science In Computer Science eingereichte Abschlussarbeit.
- [8] Ron Berman und Zsolt Katona „Die Rolle der suchmaschinen optimierung im such maschinen marketing“
- [9] Michael R. Baye, Babur De los Santos, Matthijs R. Wildenbeest „Search Engine Optimization: What Drives Organic Traffic to Retail Sites?*"
- [10] Moreno, Lourdes „Overlapping Factors in Search Engine Optimization and Web Accessibility "Universidad Carlos III de Madrid Repositorio Institucional e-Archivo Online Information Review 37 (2013) 4, S. 564-580
- [11] Rajesh Singh, S.K. Gupta „Search Engine Optimization – Using Data Mining Approach“ International Journal of Application or Innovation in Engineering & Management (IJAIEM) Website: Email: editor@ijaiem. org, Band 2, Ausgabe 9, September 2013 ISSN 2319 – 4847
- [12] Zhou Hui, Qin Shigang, Liu Jinhua and Chen Jianli "Research on Website Search Engine Optimization" 2012 International Conference on Computer Science and Service Systems.
- [13] Lihong Zhang, Jianwei Zhang, Yanbin Ju "Research on Search Engine Optimization" School of Management and Economics Beijing Institute of Technology Beijing'China under Six Sigma Management.
- [14] Antriksha Somani, Ugrasen Suman „ Gegenmaßnahmen gegen sich entwickelnde suchmaschinen-Spamming-Techniken“.