

Retrospect of Search Engine Optimization Techniques

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Abstract -The technique of influencing a website's or web page's online presence is known as search engine optimization (SEO). The ranking of a website's search results must be improved in order to attract more user-requested page views and potential consumers. Different search engines, such as picture, video, academic, news, and industry-specific ones, may be the focus of a search engine optimization campaign. By utilizing these engine rankings, they deliver better and optimized results for users. They can browse popular pages out of the many that are available in the (non-paid) search result thanks to these rankings. Additionally, SEO aids website administrators in increasing website traffic, making their sites user-friendly, establishing links, and promoting their sites' unique selling points. The web crawler assumes an imperative part in E-showcasing in a current situation. The search results are provided to us by the search engine. It shows the outcomes as a rundown. Optimizing the search result is a search engine's ultimate objective. The search engine optimizes the query items in view of pertinence. A website's rank is determined by a variety of factors, including the popularity of keywords and links, among other things. SEO classified in two categories as either white hat SEO or black hat SEO. Black hats expect that their websites may ultimately be temporarily or permanently blocked, but white hats often achieve outcomes that last a long time. To get the relevant search result, a different search engine strategy, such as on-page and off-page search engine optimization (SEO), can be considered. In this paper, we attempt to concentrate on the prestigious strategies of the web search tool to advance the output. Additionally, we examine various search engine optimization (SEO) algorithms like the panda, penguin, and others.

Key Words: SEO, On-page SEO , , Off-page SEO , White-hat SEO, Gray-hat SEO ,Black-hat SEO.

1.INTRODUCTION

A search engine is a piece of software made specifically to look up information on the Internet. Site traffic is produced because the material may be a combination of pages, photos, or other types. Techniques for search engine optimization are employed to tackle this issue. The

issue of SEO is fairly wide. Search engine marketing includes it. SEM is a hybrid paid-and-organic search engine. A method called search engine optimization is used to increase the visibility of websites and the ranking of search results. The phrase "search engine optimization" suggests that following the creation of search engines, a pertinent history must be taken into account.

Internet use and popularity have grown in recent years. It makes finding a place and gaining public notice challenging [1]. A research found that the number of people using the internet increased by around 3 million each month [1]. Thus, the user base grows. It might be challenging for websites to be found among all the other websites. SEO assists search managers in resolving traffic issues that arise on the site, as well as in making the site user-friendly, establishing links, and enhancing the sites' market worth. Industry , music, academic, news, video are the many types of searches that SEO may target. SEO is utilized to optimize websites and comprehend how people could find them online. SEO is a strategy to improve a website's ranking in search engines like Google, Yahoo, or Bing. [2].Due to the availability of several purposes and websites, delays are created.

So solving delay issues, speeding up search engine performance, and making use of the Message Passing Application Programming Interface (MPAPI) approach are all made possible by the cluster k-means algorithm. the well-known open-source web-spider and search engine Sphider. It has an automatic crawler that can follow links on a website and an indexer that compiles a list of all search phrases discovered in the pages and removes them using the Porter Stemming Algorithm. K-Means Algorithm and MPAPI are employed with common morphological data to speed up clustering for all keywords [2]. Additionally, search engines encounter several challenges; these challenges were preserved by query log.

Every search engine keeps a record of the websites that users search on, along with the user ID, question, clicked URLs, rank of URLs, and access time. The enormous quantity of data gleaned from query logs may be used to give search-related information such as browsing habits and user information [3]. SEO takes into account how

search engines operate, what users look for, and the many term types employed there.

The search engine is essential for gathering data from the internet and gives people pertinent results or data. A user, a tracker, an indexer, and a searcher make up a search engine. A successful web crawler should swiftly and correctly gather focused data. The online search tool completes the following five essential tasks in order to provide indexed listings. Crawling is the first thing a search engine does; a crawler, sometimes called an insect, gathers all of the site pages associated with a site. The next task for the web crawler is ordering. In order to be recovered later, all recovered website pages are organized and preserved in a big data set. When we use a search engine, like Google, Yahoo, or another one, the search term is matched to the database's indexed page. The search engine then evaluates each page's relevance to the search query. The online search tool's final step is to recover the best matches. Actually, the search engine just assesses inaccuracy and quality; it does not observe it.

There are three different types of search engines based on their functionality. They are made up of a combination of web search tools, manually curated catalogues, and crawler-based web indexes. A search engine returns the results that are most closely related to the keyword when we utilize it to find information or a phrase[4]. Results from web crawlers often only display the first few pages. Page rank is commonly used by the search engine to assess the value of a page. Numerous site enhancement techniques are used in order to rank better in online search tool outcomes. Site optimization (Web optimization) is the process of making a website better so that it can appear higher in organic search engine results and attract more visitors. SEO, often known as search engine optimization, is crucial to online marketing. Website designers use web optimization as a tool to improve a site's ranking in web crawler results. Making our website simple to grasp with well-written content is a significant benefit of SEO. Effective SEO requires a lot of labor, careful keyword selection, ongoing monitoring of search engine algorithm adjustments, and other factors. Each search engine's relevancy algorithm is continually changing. The updated pertinence formula will alter web crawler ranks. A search engine like Google bases its ranking of a site on the quality and highest bid of the keyword. A few elements that affect the improvement of site design may be divided into two categories: off-page SEO and on-page SEO [5]. For the improvement of on-page Website design, effective keyword selection, keyword positioning, external links, keyword density, etc. are all crucial. which is under the control of the real website. SEO off-page includes link popularity, link exchanges, and other related practices. SEO working procedure and various search engines are shown in Figure 1 and Figure 2.

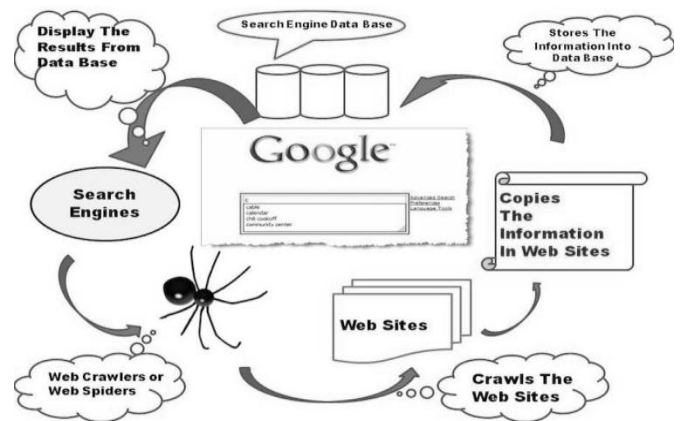


Figure 1 : Working of SEO



Figure 2 : Different Search Engines

History of SEO

- 1991 : First web site bare-bones usability and
- 1993 : Architect, Wandex
- 1994 : Alta-Vista , infoseek, Lycos, Yahoo
- 1996 : Backrub /Pagerank
- 1997 : Ask.com,Google.com registered
- 1998 : Google created
- 2000 : Marketing technology blog
- 2001 : Bring and page appeared on "CharlieRose"
- 2003 : Florida
- 2004 : Google's voice and importance of mobile in
- 2005 : Decrease the amount of spammy link
- 2009 : SEO shakeups
- 2010 : Another phase of SE /Google caffeine
- 2011 : Google panda , Google freshness
- 2012 : Google penguin
- 2013 : Google Humming bird
- 2015 : Mobile friendly test, Google's mobile
- 2016 : Crack down on mobile pop-ups(Google
- 2017 : Google Fred
- 2018 : Google Medic
- 2019 : Google BERT

2. SEO TECHNIQUES

Search engine optimization strategies come in a number of flavors, including white-hat, black-hat, and gray-hat SEO.

White-Hat The term "web optimization philosophy" describes a tactic or direction that adheres to the guidelines established by web crawlers. Websites that utilize ethical SEO techniques to raise their page ranks are not penalized by search engines. Many high-quality websites may be found using white-hat SEO techniques. Both search engines and people benefit from white-hat SEO. White-hat SEO is the antithesis of black-hat SEO.

The **Black-Hat** SEO technique ignores search engine recommendations. Black-hat SEO tricks the search engine to boost the rankings of low-quality websites. Using this approach can lower your web crawler ranking. Dark cap techniques for improving website appearance are mostly used by spammers. Black-hat SEO techniques include keyword stuffing. Catchphrase stuffing increases the number of keywords in the site content. Some HTML labels, such as "title," "Meta," "h1," "alt," and "a," among others, are used by spammers as catchphrases. These are obvious watchwords that are unrelated to the website. which the web index considers to be an important site.

Another tactic is to use indiscernible text. Spammers utilize unrelated phrases to boost the amount of keywords on a website. However, these phrases have no relation to the website in issue, therefore spammers employ them. People cannot see this type of term, but search engines can. Spammers hide these phrases by using the website's background color. The most popular black-hat SEO strategy is a link farm. A link farm is a collection of websites, each of which has links to every other website in the collection. To increase the popularity of their links, spammers employ link farms. Link farms can be made either manually or automatically.

A spammer will create a network of websites that are all linked to one another. Link popularity is increased through link exchange. Sending URLs is the method through which a site rises in the rankings. In order to hide the spam sites, the spammer uses this technique to redirect the browser to the URL as soon as the page loads. Spam pages can be seen by the search engine, but not by the user. For spamdexing, doorway pages are developed. These pages are of poor quality and quantity, and the user will not get anything from them. The spammer uses software to generate several websites, which are then converted into the home page automatically. Doorway pages use a range of well-known, unrelated keywords to increase their search engine rankings. Spammers use shrouding tactics as a kind of deceit. This method provides the client and the online search tool crawler with two variations of cloaked pages. Only the HTML tag field is exposed to crawlers.

Gray Hat The term "web optimization" refers to a combination of tactics used by various web search tool boosters. White-hat and black-hat SEO components are combined in the gray-hat SEO approach. Despite the fact that this is the better strategy for ranking higher in search engine results, the search engine will disregard it. Search engine results do not typically include this technique. a few dark hats The majority of web search tool analyzers use website optimization techniques including hiding, copy content, old space, online entertainment robotization, acquiring devotees, and others.

3. TYPE OF SEO

Search Engine Optimizations are : off page optimization, on page optimization, technical optimization Figure 3.

On-Page SEO, your website is enhanced to rank better in search engines and draw in more people. On-page SEO is impacted by a wide range of factors. Among other things, factors include the choice of keywords, their frequency, appearance in the title tag, alt tag, URL, anchor tag, and outbound link.

Because users engage with keywords, choosing the appropriate ones is essential to SEO. The first stage in the most successful SEO plan is selecting the appropriate keywords for a website.

The ratio of keywords to total words on a webpage is known as keyword density.

The number of catchphrases used on a website is a key factor in web optimization. A page should have watchwords that are between 5% and 7%, or 7% and 8%, in thickness[12].

The most crucial element of website optimization is the title tag. The title of the page is specified using a title tag. The website's title tag is a key ranking element for the majority of search engines. The keyword has to be in the title tag. The search engine crawler won't have any problem discovering the website if a keyword is utilized in the title tag. A title label that is between 50 and 80 characters long can help an online search tool discover the website more easily. The anchor tag includes the keyword. Usually, pages that have text links to keywords perform better. Page size has an impact on on-page SEO. The overall file size remains constant. Page size, within reasonable bounds, is crucial for streamlining websites. A page size of 150 kilobytes is good for SEO purposes. The URL is a representation of the website's internet address. The term must appear in the URL. If the URL contains an appropriate term, the website may be rapidly located by the search engine. Short URLs are preferred by the search engine.

The robot.txt record informs search engines about which parts of your site they should crawl and which parts they

shouldn't. The robot.txt file must be in the root directory of the web server and have the name robot.txt.

The site page contains connections to different sites, additionally alluded to as an active connection. It must be related to this website and the page. Most outside joins support site rankings

- a. **Keyword Location:** The SE crawler looks for keywords in the title, header, alt, meta, body, and URL tags as well as in anchor text and URLs.
- b. **Title Tag:** The most important ranking element is the title. The majority of search engines prioritise a website's title tag when determining where it will appear on search result pages [7].
- c. **term Density:** This refers to how frequently a term appears on a page in relation to the overall amount of words on the page. A significant optimization consideration should be the frequency of the term in the body tag and the title tag. For a website to rank higher, keyword density should be between 2% and 8% [8].
- d. **Keyword in URL:** If a keyword is included in a URL, this site will be found by web spiders much more quickly. The web crawler gives distinct domain suffixes, such gov or edu, priority. In SEO, shorter URLs are also preferred [9].
- e. **Keyword in Meta Tag:** A descriptive description of a page or website that accurately reflects the content of web pages may be found in the Meta tag. If relevant keywords are identified in the meta description element, the website will be crawled.
- f. **Term used in Alt Text:** In Alternative text for pictures is specified in the tag or text. The alt tag's description performs the same purpose and conveys the same essential information about the image.
- g. Short and informative, alt tags represent the body text that describes the image.
- h. **Term in Anchor Text:** The term in the anchor text identifies the link. Pages with link text based on search terms typically perform better.
- i. **Title Length:** An suitable use of the term in the title tag is the most crucial on-page aspect [10]. The theme of the website should be reflected in the website title. The visitor can quickly grasp some website content by using the title name. Limiting the length of the title yields positive outcomes [8].
- j. **URL (Uniform Resource Locator):** An URL describes where a webpage is located on the internet. The URL included search terms so that crawlers could find it

Off-page (SEO) Web optimization utilized for connecting strategy and it isn't connected with alteration content. It incorporates backlinks, interface trade, inbound connections, and online entertainment showcasing.

More backlinks make a link more popular. which site or page is given a higher positioning. It assumes a critical part in off-page Website optimization. The relevant term must also be included in the high-quality backlinks. Link swaps are a common part of off-page SEO. The exchange of links between websites is referred to as "link exchange."

There are several ways to trade links. Exchanging links with other related websites that have a high page rank is one tactic. By trading links with other websites, users may boost website traffic and their rating in search engine results. Costly and time-consuming.

External links pointing to a website are known as inbound links. More inbound connections of a higher calibre are required. As many inbound links as feasible help with search engine rankings. The main elements that promote a website to the top of the list are the amount and quality of external links. Social media are currently the most crucial element. This is how social networking sites are included into our website.

a. **Social bookmarking** is the ideal way to manage, compile, and save bookmarks for online resources, according to 2.1.2. In order to retrieve a link from the site, SEO players look for relevant social bookmarking platforms where they may add their own website as a bookmark. Instead than having to remember the address of a webpage when we encounter one that we find interesting, we may essentially save the address as a "bookmark" in our browser. It is quite similar to saving links to our browser's favourites, with the difference being that we are saving to a website that is accessible from any computer in the globe. But the 'social' part is what makes social bookmarking unique. Everybody can show up in everyone else's bookmarks[6].

b. **Directory Submission:** This website submits its link to well-known internet and web directories, a practise known as directory submission. The url, title, description, and other website information are supplied as part of the directory submission procedure [3]. A bit more succinct information about the business, product, services, and website is offered in directory submission. There are several directories available, some free and others paid.

c. **Forum posting** is a strategy for link building in which quality forum postings are linked to websites. In this approach, efforts are made to forge connections through gathering and research on relevant specialised

discussion forums. To drive traffic to websites and online pages, web forums are employed. As a result, while participating in online forums, SEO experts always reply with their website links in their signature. In order to get high-quality traffic and high-quality back links to our website and web pages, forum posting is a very effective SEO link-building approach [6].

- d. Press Release Submission (PRS):** With this, the most recent news is posted to relevant websites. It is one method of reporting information on events happening inside our company. Backlinks from news websites, a high ranking in Google News, and potential media coverage are all benefits of PRS. We will make sure that the general audience will want to read our press release submission when we write it. A press release similar to the newspaper piece should be attempted. PRS websites are frequently highly rated and quickly indexed by Google. Within a week of submission, a press release can be ranked. A well-written PRS can increase our website's traffic and our chances of getting connections from reputable websites. The origin of a new product can be a good subject for our press release submission. The advantages of the product will be highlighted in a well-written press release. A very effective press release can boost our traffic, provide us business skills, and generally help our company.
- e. Classified Submission:** In this submission, online classified advertising are posted to websites that cater to the classifieds industry. The greatest way to obtain back links is also through this. A classified ad is a brief, eye-catching advertisement posted on a website that attracts visitors. Online classifieds, however, differ from conventional advertising or typical business model ads. Additionally, it assists us in SEO by increasing traffic (passage) to the website we are presenting. Our website receives more visitors as a result of classified submissions [6].
- f. Article Submission:** One of the finest methods for obtaining back links is to submit articles to reputable directories. It is one of the oldest and most esteemed link-building strategies used in the SEO industry. Webmasters and SEO professionals regularly submit a large number of articles to these article directories in order to improve the back links of the websites. Many link development tactics have entered the market as a result of the fact that search engines now give back links a lot of weight. Users may submit their articles to article directories and include live links in the author box by using article submission. At this moment, webmasters receive their free back links and article directories receive free material for their websites. The webmasters were completely unaware of article submissions until it became very difficult to find one

way back links. Obtaining high-quality backlinks to our website is crucial. Article posting was one of the key link-building strategies adopted by all webmasters as they all worked on this topic.

- i. Inbound Link:** In this context, inbound links are high-quality external connections pointing at a website. The total number of inbound links is a measure of link popularity. The number and calibre of incoming links determine the page rank of a website in Google. The amount and quality of external links are still acknowledged as the key ranking criterion to promote a site in the top ranking list [9]. To score highly in SE results, the web page must have a greater number of relevant inbound connections. Search engines do not favour inbound links in text form over those in visual form, such as banners, advertising, and pictures.
- ii. Link Reputation:** Pages and websites with more back links perform better in search engine results. However, it is crucial to remember that external connections' quality is equally crucial. External links should lead to credible, pertinent, or related material. Include keyphrases that are comparable to the search query.
- iii. A black hat SEO:** Creating a website is a more efficient and affordable marketing technique to reach a large audience. One of the secrets to building a website that makes money is to promote it in the SE result list. Sometimes SEO strategies are utilised in an unethical way termed spamming to achieve higher rankings in search engine result listings. Such unethical SEO methods circumvent search engine guidelines and push an undeserved website to the top of the results. Such a method not only deceives search engine algorithms, but also decreases the value of search results and boosts visitors. And they
- iv. Popularity of Clicks:** The quantity of website clicks is referred to as click popularity. It is an important aspect in improving website top rankings. Visitors who click on webpages receive specific benefits from SE. However, SE monitors clickers by tracking their IP address. As a result, the owner cannot click to his site repeatedly in order to increase click popularity because clicks from a particular IP address are only counted once.
- g. Blog commenting:** This method entails leaving comments on various blogs and websites in order to build back connections. On blogs and websites in the same niche, blog comments are quite powerful. Blog

comments can provide useful connections. A comment on a DOFOLLOW blog that is related to our specialty and a link back to our website or blog might be viewed as a popularity vote and raise the perception of our website's relevance to our topic. The better for our site, Google considers the more relevant our website is to our theme. Comment whenever you can on blogs and websites that have a bigger following than ours. Many blogs include a section for readers to leave comments at the conclusion of each article. Typically, the commenter's name, email address, and website are requested in the blog commenting section.

Technical SEO is the process of making a website more search engine friendly, but it can also involve user experience-related tasks[11]. The process of assisting with the technical optimization of a website in order to raise the ranking of its pages in search engines is known as technical SEO. The goals of technical optimization are to speed up, make a website simpler to crawl, and make a website more intelligible to search engines.

- a. **Original, Enriched Content** Where your technical SEO efforts start to leak into your on-page SEO efforts are in original, fully enhanced content that is not repeated anywhere. This indicates that the material on your website is unique and well-written and cannot be found anywhere online.
- b. **Webpage Speed** One of the main ranking variables taken into account by Google is site speed. You want your website to load quickly and with few interruptions.
- c. **Site Architecture** Your website needs to be intuitively organised and useful. This means that in addition to having clear parent, child, and grandchild sites, you also need to look for and get rid of any 404 or 301 redirects. Use the appropriate hreflang tags if your website has several translations (for instance, in different languages).
- d. **Support for Mobile Devices** Your website must be fully responsive and optimised to be read and interacted with on phones, tablets, and computers since Google and other search engines place a strong focus on mobile-first indexing.
- e. **Site Safety** Online security is crucial, and not just for Google. To rank higher and better protect your brand online, make sure your website is encrypted and safe.

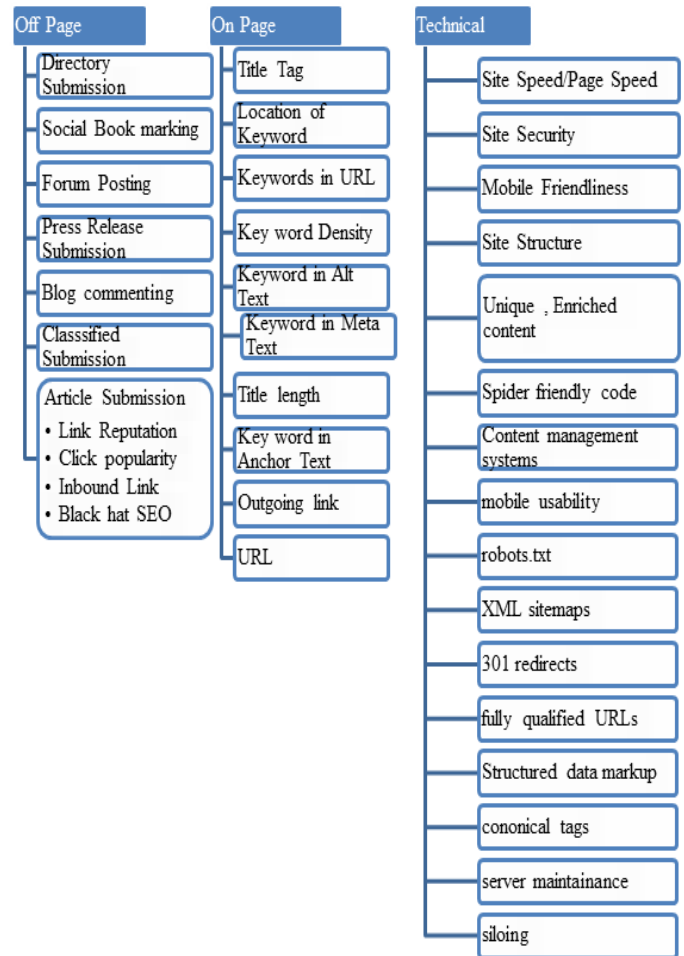


Figure 3 : Types of SEO

4. GOOGLE ALGORITHMS

Web index computations are needed to better increase page rank. It may be used by webmasters to learn about fresh components that boost page rankings and crucial search engine rules for placing a website. Here, we go through a few significant Google computations. As follows:

A Google calculation is called **Google Penguin**. On April 24, 2012, Google released the Google Penguin. The main goal of Google Penguin was to degrade the ranking of websites that didn't adhere to its guidelines. This algorithm was created for the black-hat SEO technique, which goes beyond the rules set out by search engines. The Google Penguin calculation's foundation is built on the nature of backlinks.

Backlinks are counted, along with their quantity and quality. The number of excellent backlinks a site has does not necessarily determine where it will rank in Google. If a website has the greatest number of high-quality backlinks, it will rank higher. A website will be granted a higher ranking under Penguin 1.1 if:

- a) There aren't too many artificial links on the webpage.
- b) The website did not use the "shrouding" technique, invisible text, or opaque text (dark cap Website optimization) techniques.
- c) The website must have a significant number of high-quality backlinks.

In February 2011, **Google Panda** made its debut. The request for Google's list items was altered using this computation. Although there are some low-quality websites, Google Panda's main goal is to increase the ranking of high-quality websites. Duplicate content on websites and blogs is affected. After the Panda algorithm was put into place, websites that used a lot of scraping and violated copyright were given a better rating in Google search results than websites with original material. Google most recently mentioned scrubber execution assistance. Google improved Google Panda in April 2011.

An online content-based algorithm called Google Panda exists. Google Panda penalises low-quality content websites and assigns them a low ranking. Websites with low-quality backlinks are not penalised. Panda states that a website can improve in the ranks if:

- a) The information on the site is reliable.
- b) The information was written by an authority.
- c) The website doesn't have much advertising.
- d) The website's content was free of errors, and it needed to be clearly specified.
- e) The real-time usability of the website

The value of website content serves as the foundation for Google Panda's ranking. The duplicate content, subpar content, and thin content are the three forms of online material that are categorised according to their strengths. If a website's material falls short of fully assisting users, it is deemed to be thin. Low-quality material is produced when an author duplicates every word from several online pages. If a webpage or website completely copies the content of another webpage or website, it is referred to as a duplicate.

A new algorithm called the **Hummingbird** algorithm combines both traditional and cutting-edge techniques. It was unveiled on September 26, 2013. The word "Hummingbird" relates to the little bird's nimbleness and precision. Better sites will fare better in this computation if they contain relevant backlinks, high-quality content, and well-placed catchphrases. Hummingbird intended to respond to the proper kind of questions pertaining to the customer in order to advance Google, in addition to selecting explicit catchphrases from a question. It begins

by offering long-tail keywords. On October 26, 2015, a machine learning-based algorithm became online. This method is known as the Rank Brain algorithm. It is included in the Google Hummingbird computation.

The Position Mind calculation enables Google to understand customer inquiries and communicate the most crucial results. Due of a dearth of query-specific features and subpar material, Google created this algorithm. If a website's material is thorough, competitively analysed, and optimised for relevancy, it can move up the ranks based on this algorithm. In light of the new findings, a few adjustments have been made in accordance with the Google computations.

Ex. Google employs the same algorithm to enhance search results and penalise low-quality websites. Variations of this algorithm include Phantom update, Panda Dance, Pigeon, Possum, and Fred.

5. DIVERSE FEATURES

Sharing stuff online: Web content sharing is a strong element. Social networking platforms like Facebook, Twitter, and Google+ get the content that users share from websites. Increased traffic will result from this tactic. For instance, we can make more Facebook sites that are appropriate for social media. A customer sharing this page will result in more conversations on the website. Customers who participate in virtual entertainment have the chance to interact with website visitors who "like" or "follow" them online.

Create new material: The majority of people are concerned with websites' content and interested in fresh web content. SEO requires a content management system (CMS). It is employed to create, store, and arrange the content on our website. The administration of the website's structure is also done using a web content management system, or WCMS. More visitors visit a website when it contains fresh, high-quality material. The site engineer should have access to the tools necessary for content management[12].

Mobile-specific SEO: The majority of consumers today use smartphones that run either Android, iOS, or Windows. These kind of smart phones allow them to access the internet.

Some websites display correctly on PCs but not on mobile devices. The importance of portable SEO cannot be overstated. Portable A technique called search engine optimization greatly and appropriately improves how a website appears on a mobile device. Utilizing mobile SEO makes growing a website's traffic easier. A website is properly if it contains the following characteristics, it is considered versatile:

- Even when the screen is zoomed in, the website's material remains simple to read.
- On a small screen, the website should be straight forward to browse.

The ranking will largely be used to assess the mobile friendliness of the website.

A few websites stack pages more slowly than others, which irritates visitors. The issue may be resolved by building a website that loads quickly. The website that implements the agreement should use very little advertising, have images that are in either PNG or GIF format, and include the appropriate picture elements. On the first page, four to five posts are displayed.

Competitor analysis: Today, a competitor analysis is a crucial component of website promotion. It begins prior to site activities. It helps website designers grasp competing tactics. This method allows us to choose the designated catchphrases and how to enhance backlinks.

7. CONCLUSIONS

Three techniques are primarily employed for search engine optimization. white, grey, and black hat SEO. White-hat SEO has the advantage of a web page's ranking in search engine results being stable over time. Fast ranking is a benefit of black-hat SEO. The developers warn against utilizing the black-hat technique since it eventually causes harm to a website. Gray-hat SEO is a fascinating method for raising a website's rating in our opinion. We made an attempt to summarize the concept and compare the bulk of the current search engine kinds and strategies. The clear explanation of an important SEO idea in this study will be helpful to developers and researchers in further work.

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