Differential Analysis of Search Engine Optimization

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Abstract:

In today's world, the search engine is essential to E-marketing. We receive the search results from the search engine. The outcomes are displayed as a list. Optimizing the search result is a search engine's main objective. Based on relevance, the search engine optimizes the search results. Based on several factors, search engines give a given web page a rank. Elements including link popularity, keywords, etc. To obtain the most pertinent search results, one can take into account several search engine strategies such as on-page and off-page search engine optimization (SEO). In this essay, we attempt to examine the well-known search engine optimization approaches. We also examine several forms of search engine optimization.

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

Introduction:

Differential analysis of search engine optimization (SEO) is a method of comparing two or more websites or web pages to identify differences in their (Nurmi)SEO strategies and tactics. This can be done by analysing various elements of the websites such as their content, structure, meta tags, and inbound links. By identifying these differences, it is possible to gain insights into what strategies and tactics are working well for the websites being analysed, and to identify areas where improvements can be made to your own website.

There are various tools and techniques that can be used to perform a differential analysis of SEO. Some of these include:

White-hat SEO:

White Hat SEO refers to the use of ethical and legitimate techniques to improve a website's

search engine ranking. These techniques align with the search engines' guidelines and aim to provide a positive user experience. White Hat SEO techniques include:

Black Hat SEO:

Black Hat SEO refers to the use of unethical or manipulative techniques to improve a website's search engine ranking. (Couzin, 2008)These techniques are in violation of search engine guidelines and can result in penalties or even being banned from the search engine's index.

Gray-hat SEO:

Gray Hat SEO refers to techniques that fall in between White Hat and Black Hat SEO. These techniques are not strictly in violation of search engine guidelines, but they are not necessarily in compliance with them either.

Type Of SEO Techniques:

There are four main types of SEO techniques: on-page SEO and off-page SEO, Technical SEO:

1. **On-page SEO:** refers to the techniques used to optimise a website's content and structure to improve its search engine ranking. (Kent, 2009)This includes optimising the website's title tags, meta descriptions, header tags, and content for relevant keywords. It also includes techniques such as improving the website's loading speed and mobile responsiveness, and ensuring that the website is accessible to search engines through the use of proper site architecture and internal linking.

2. **Off-page SEO:** refers to the techniques used to improve a website's search engine ranking through external sources. This includes building backlinks from other websites to your own, as well as building a strong online presence through social media and other forms of online marketing. Off-page SEO also includes building the brand reputation and trust.

3. **Technical SEO:** refers to the optimization of a website's underlying code, structure, and server settings in order to improve its visibility and accessibility to search engines. (Munsell, 2010)This includes making sure that the website is properly indexed, that it loads quickly, and that it is mobile-friendly. Technical SEO also involves ensuring that the website's URLs are clear and descriptive, that there are no broken links or 404 errors, and that the website is free from any penalties or errors that could impact its visibility in search engine results.

SEO audit:

is a process of analyzing and evaluating a website's technical and on-page SEO performance in order to identify any issues that may be impacting its search engine rankings. The goal of an SEO audit is to identify areas that need improvement and to provide recommendations for how to optimize the website for search engines (White, 2011).

SERP can be affected by different ranking factors, and can be influenced by different SEO techniques. Some factors include, keyword relevance, back links, meta tags, and many others. SERP can vary depending on the search engine being used, as well as the user's location and search history. SERP can also include various types of content such as featured snippets, map packs, local packs, images, videos, and many others, which can be used to help users find the most relevant and useful information for their search query.

Google Tools For SEO:

#Google Search Console: Google Search Console is a free tool offered by Google that allows webmasters to monitor and maintain their site's presence in Google search results. It provides information and insights about how your website is performing in search results.

#Google Analytics: Google Analytics is a free web analytics service offered by Google that tracks and reports website traffic. It helps website owners understand how visitors interact with their website.

#Google Ads: Google Ads (formerly known as Google AdWords) is a pay-per-click (PPC) advertising platform that allows businesses to display ads to users on Google search results and other websites.

#Google Trends: Google Trends is a free tool offered by Google that allows users to explore data and trends about specific search terms and topics. It provides information about the popularity of a search term over time, as well as related queries and topics, and the geographic locations where the search term is most popular (James).

Google's algorithms:

Google's algorithms are complex mathematical formulas that are used to determine the relevance and importance of web pages for specific search queries. These algorithms help Google to deliver the most relevant and high-quality search results to users. Here are some of the key algorithms used by Google:

1. **PageRank:** PageRank was Google's original algorithm that was used to rank web pages based on their importance and relevance. It uses a complex formula that takes into account the number and quality of links pointing to a page, among other factors.

2. **Hummingbird:** Hummingbird is a more recent algorithm that was designed to better understand the meaning behind a user's search query and to deliver more relevant results. It focuses on the context of the search query, rather than just individual keywords.

3. **Penguin:** The Penguin algorithm was designed to penalize websites that engage in spammy link building tactics, such as buying links or participating in link schemes (Carson, 2013).

4. **Panda:** The Panda algorithm was designed to penalize websites that have low-quality or thin

content. It's intended to reward high-quality websites and to improve the overall quality of search results.

5. **BERT:** BERT is a language processing algorithm that helps Google to better understand the context and meaning of words and phrases in a user's search query. It's designed to deliver more accurate and relevant results for natural language queries.

These are just a few of the many algorithms used by Google to determine the relevance and importance of web pages for specific search queries. Google's algorithms are constantly evolving and being updated, so it's important for websites to stay up-to-date with best practices for search engine optimization (SEO) to maintain their visibility in search results (Johns, 2014).

Mobile and desktop SEO:

Mobile and desktop SEO are similar in many ways, but there are also some key differences to consider. Here are the main differences between mobile and desktop SEO:

- Device compatibility: Mobile SEO needs to take into account the various types of mobile devices, screen sizes, and browsers, whereas desktop SEO just needs to worry about desktop computers.

- User experience: Mobile devices have smaller screens and touch-based navigation, which can affect the user experience. Mobile SEO needs to optimize for this experience, such as using a responsive design and larger font sizes.

- Load speed: Mobile devices often have slower internet connections, so mobile SEO needs to prioritize fast load times to keep users engaged.

- Local search: Mobile devices are often used on-the-go, so mobile SEO needs to prioritize local search results and maps.

- Voice search: Voice search is becoming increasingly popular on mobile devices, so mobile SEO needs to optimize for natural language queries.

- App indexing: Mobile devices often use apps, so mobile SEO needs to consider app indexing to ensure that app content can be found in search results.

While both mobile and desktop SEO need to focus on providing relevant and high-quality content, optimizing for keywords, and building links, there are important differences to consider for each device type. A comprehensive SEO strategy needs to take both mobile and desktop into account to reach the maximum number of users (Cutts, 2015).

Search behaviour:

Search behaviour refers to the actions and patterns of users when they search for information online using search engines such as Google, Bing, Yahoo, etc. Understanding search behaviour can help companies to improve their search engine optimization (SEO) and search engine marketing

(SEM) strategies, as well as their overall online presence.

By understanding search behaviour, companies can improve their search rankings and reach more users with relevant and targeted content. They can also use this information to optimize their websites for specific devices and improve the user experience for their target audience.

Ranking Algorithm:

A ranking algorithm is a mathematical formula used by search engines to determine the relevance and importance of web pages for a specific search query. The ranking algorithm takes into account various factors such as keywords, content quality, user engagement, and backlinks, to determine the relevance of a web page to a search query. The ultimate goal of a ranking algorithm is to provide the most relevant and high-quality search results to users (Enge, 2016).

Here are some of the key factors that a ranking algorithm might consider:

1. Keywords: The presence and relevance of keywords in the title tag, headings, and body content of a web page can impact its ranking.

2. Content quality: Search engines look for high-quality, unique, and relevant content that provides value to users. Pages with low-quality, duplicate, or thin content may be penalised.

3. User engagement: User engagement metrics such as click-through rate (CTR), time on site, and bounce rate can impact a web page's ranking. Pages with high engagement signals are often seen as more relevant and authoritative.

4. Backlinks: The number and quality of backlinks pointing to a web page can impact its ranking. Pages with a high number of high-quality backlinks are often seen as more authoritative and trustworthy.

5. Mobile optimization: With the increasing popularity of mobile devices, search engines now place a high importance on mobile optimization. Pages that are not mobile-friendly may be penalised in search results.

6. Local optimization: For local search queries, search engines consider factors such as the location of the business, distance from the user, and presence in local directories (Fishkin, 2017).

These are just a few of the many factors that a ranking algorithm might consider when determining the relevance and importance of a web page for a specific search query. As search engines continually update and improve their ranking algorithms, it's important for companies to stay up-to-date with best practices for search engine optimization (SEO) to maintain their visibility in search results.
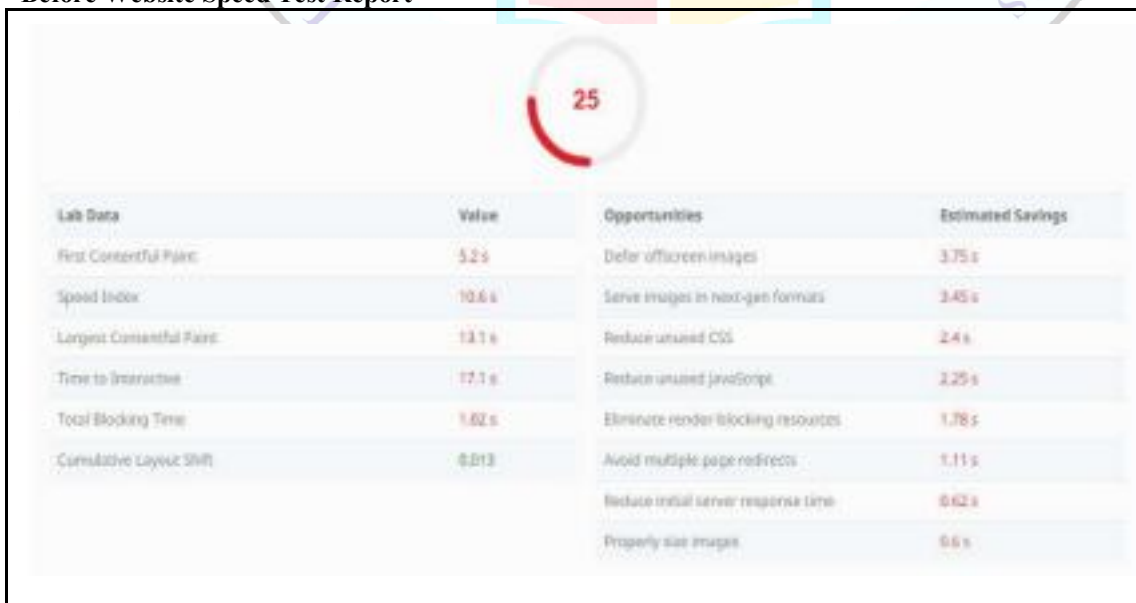
Analysis study:

Before SEO (We find out this mistakes)

1. Missing Title tag

2. Missing Meta Description

3. Not Setted proper tracking

4. Alt text missing

5. Less Images

6. Low quality content

7. No internal linking

8. 10 Backlink

9. SSL Missing

10. Legal Pages Missing

11. Website hosted on bad server

Before Google Search Console Report
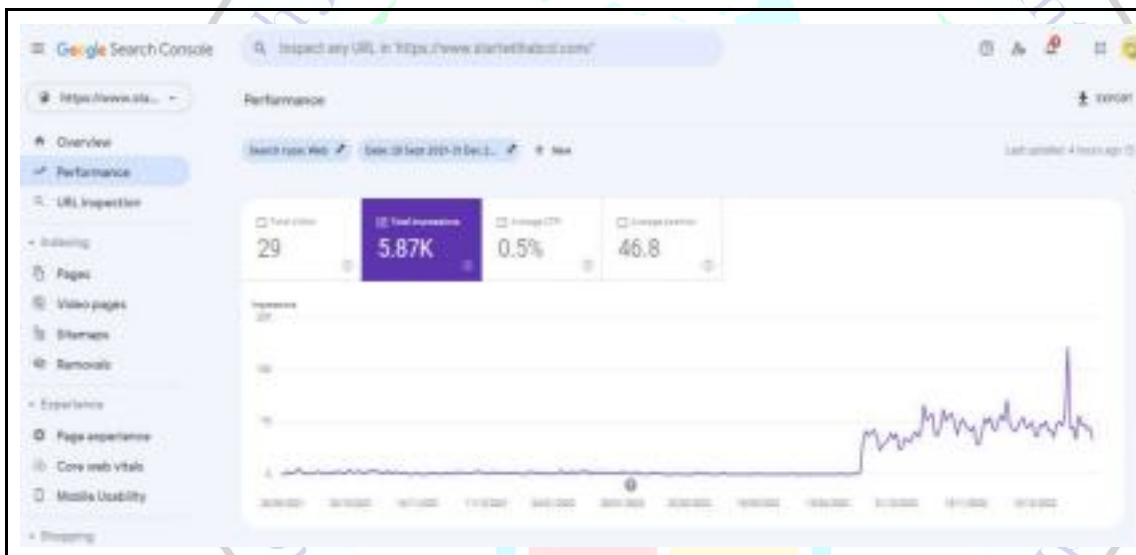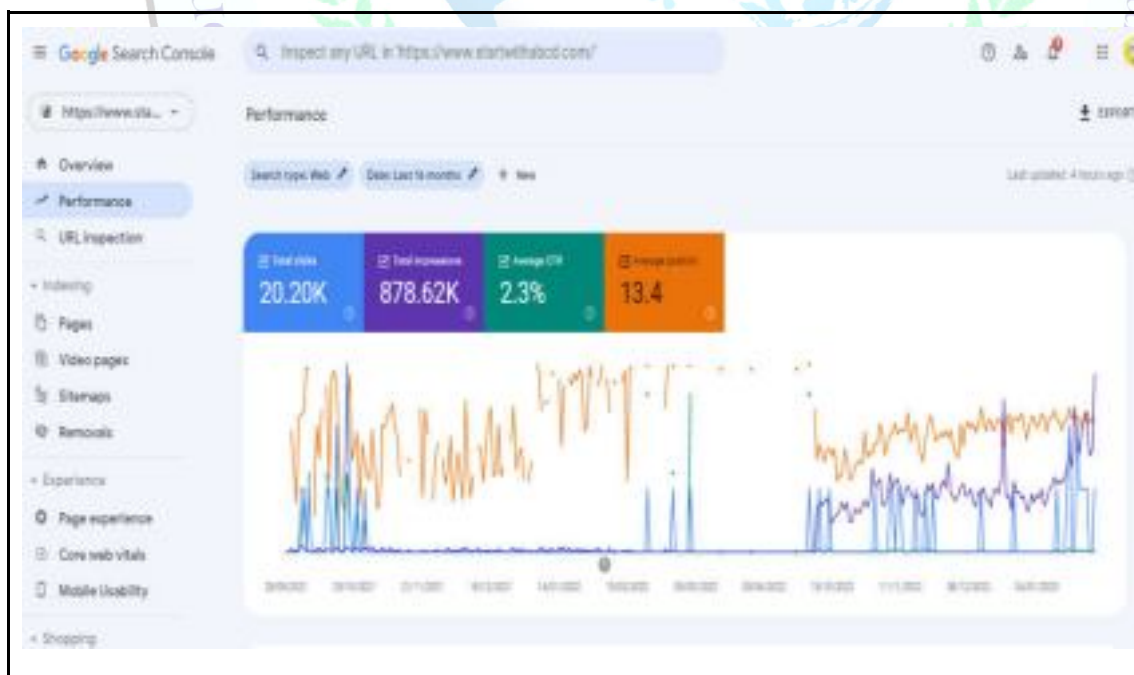

Before Website Speed Test Report

After The SEO:

1. We restructure complete website

2. We write 20 SEO optimised titles tag

3. We Write 25+ New Meta Description

4. Keyword research. We use low competition keywords

5. We use short paragraph content

6. We add Images, info graphics and images on our blog pages

7. We set up proper internal linking structure

8. Newly setup Google Analytics and Search console

9. We share content on all social media platforms

10. We add new free stock images

11. We write 20 new blog post

12. We run Off-page SEO campaigns

13. Website caching setup

14. We Setup CDN and SSL

15. We newly add all legal pages like privacy policy T&C pages

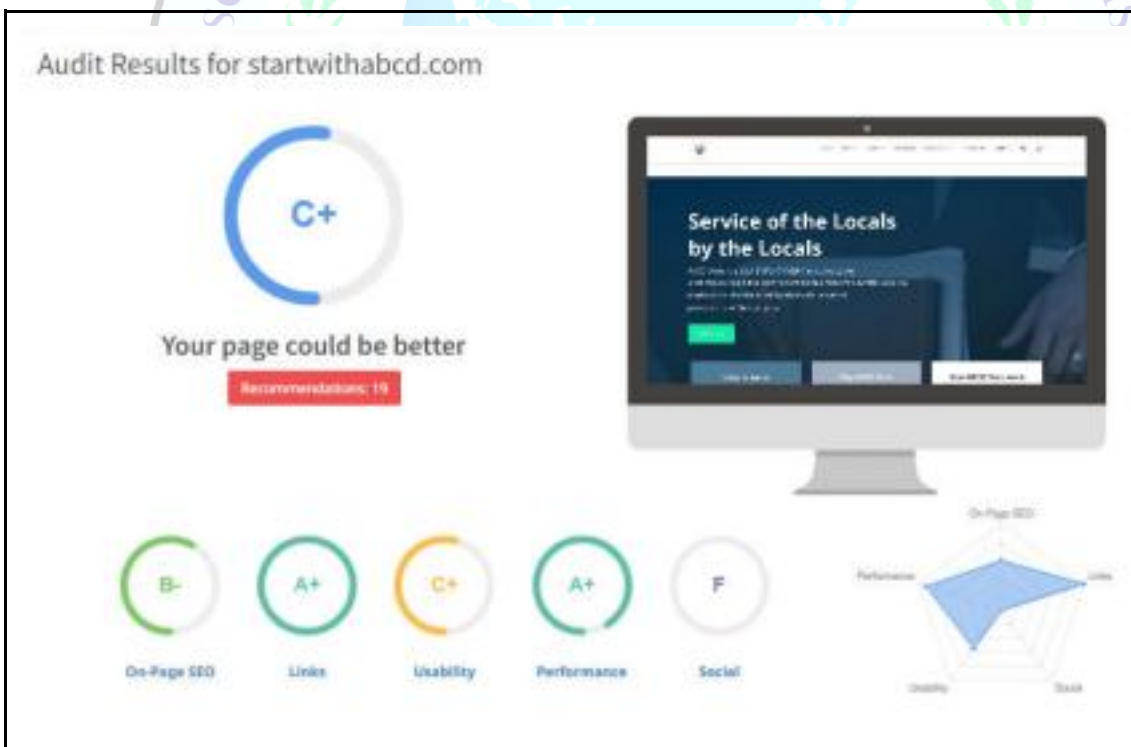After everything done we wait for results and finally we got impressive result

Before Google Search Console Report:

Before Website Speed Test Report :

Overall SEO:

Conclusion:

In conclusion, a comprehensive SEO report should evaluate a website's performance in search engines and make recommendations for improvement. The report should cover a variety of factors, including keyword analysis, on-page optimization, backlink profile, technical SEO, and mobile optimization. The report should also use tools such as Google Analytics, Google Search

Console, and Google Trends to analyze website data and track progress. The final report should summarize the findings and make clear, actionable recommendations for improving the website's visibility and ranking in search results. It is important to regularly monitor and update the website's SEO strategies to stay ahead of changes in search algorithms and maintain a strong online presence.

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