A study of search engine optimization: Role and importance

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ABSTRACT

In the present information age, the management of the website is a hot topic and the effects of a search engine over a website. This has forced a large number website owner to make effective efforts for search engine optimization. The positioning of a website in the first place of a search result of a search engine is a tedious job, and to make this possible one needs to understand the basics of search engine optimization. There are various techniques to help us to increase the ranking of our website such as the use of proper keywords, generating backlinks, use of proper tags, metadata etc. SEO is divided into two parts: On-Page and Off-Page SEO. In order to be successful, both the areas require equal attention. This paper aims to explain the functioning of the search engines along with the role and importance of search engine optimization.

Keywords: Keywords, Metadata, On-Page SEO, and Off-Page, Backlink.

1. INTRODUCTION

A search engines functions over two distinctive features, crawling and indexing. Crawling is done with the usage of robots called crawlers or spiders over a source code of a website and during crawling these robots make a copy of your source code and store it in the form of cache over several of their datacenters. When a search is performed over a search engine the search engine retrieves these cache based on the related search query and displays it over the SERP or search engine result page. Although search engines use many algorithms and techniques to produce the results on time, it is difficult to crawl around billions and billions of pages. To help the search engines retrieve the results faster the website developers use many search engine optimization tactics

Search engine optimization (SEO) is a methodology that helps your website to rank higher in organic (or “natural”) search results, thereby making your website to be more visible to people who are looking for your product or service via search engines. The activities that are performed by SEO to increase the amount of targeted traffic that comes to a website through a search engine. It includes things like making changes to the text and the HTML code. It also includes direct communication with the search engine by making requests for listings or links. SEO is a technique which helps all search engines to find a site and rank them higher than the millions of other sites in response to the given search term. By which SEO helps to get traffic from search engines. The most important SEO element for every search engine is the keyword with which the search strings are matched. Choosing the right keyword is the first and the most critical step to a successful SEO.

1.1 Search Engine Optimization Categories

Search Engine Optimization has been broadly classified into three different categories

White Hat SEO

The ethical and best way to optimize any website is called WHITE HAT SEO technique. This type of optimization is well supported and appreciated by all search engines and mainly by Google since this technique of optimization is a natural way to achieve better results. This method talks about regular updated with quality and unique content to get better links from relevant niche websites and blogs. This means that the webmaster does not take a single attempt to mislead search engine and does not try to cheat.
Gray Hat SEO
Suppose that a webmaster uses some irrelevant techniques to optimize their website is known as GRAY HAT SEO technique, for example, it can be said to be a gray hat SEO if the optimizer may buy or exchange links with other websites to get better search engine ranking. This technique is not long-term for search engine ranking.

Black Hat SEO
If a webmaster or optimizer is doing spamming in the link building or making irrelevant links with some irrelevant niche websites in order to increase backlinks, this will be considered as Black Hat SEO Technique. This technique of SEO is unlawful and can be easily detected by a search engine like Google, especially after the new update of google panda and google penguin.

1.2 Search Engine Optimization
Given that search engines have been increasingly sophisticated in many ways, still, it cannot see and understand a webpage as the human does. To overcome this problem we go to various search engine optimization techniques. The most common SEO technique is the On-page and Off-page SEO. The On-page SEO deals with the keyword analysis, metadata analysis, etc. The Off-page SEO deals with link building with which a website e is promoted to other web sites.

On Page SEO
This technique or methodology speaks about tweaking necessary changes in the source code of the webpage. On-page SEO is the art of rearranging the contents of a website such that it becomes search engine friendly. Various methods of On-page SEO include:

- **Title Tag:** The title tag is really important for good search engine ranking. Search engine crawls the content of this tag on the priority basis. A page title is the first thing, a search engine will look.
- **Meta Tag:** There are two primary Meta tags used in Search Engine Optimization, that is keyword and description tag.
- **Alt Attribute:** Search engine only reads the alt attribute of the image tag
- **Header tags (H1, H2, and H3):** HTML Heading Tags are equally important for search engine point of view.
- **Permalinks of Web Pages:** The Meaning of Permalink is URL (uniform resource locator) of a webpage. It should be keyword oriented and SEO friendly.
- **Internal Linking:** Internal Links are hyperlinks that point to the same domain. This factor is also important for search engine point of view.
- **Keyword Density:** Keyword Density is the percentage of times a keyword or phrase appears on the web page compared to the total number of words on the page. Keyword Density is really important in terms of SEO.
- **Sitemap:** In Sitemap, all important website links are available with date and updated information of the page. Search Engine will crawl the sitemap links on the priority basis

Off Page SEO
This methodology speaks about techniques that are used for creating inbound links to a webpage to increase the anticipated popularity of the page with regard to search engine algorithms. Various important components of Off Page SEO include:

- **Link Building**
- **Article Writing**
- **Blog Publishing**
- **Social Media Bookmarking**
- **Directory Submission Sites**
- **Forum Postings**

2. CONCLUSION
Search engine optimization is the best process to attract the internet users and gain traffic to a website. It is also useful in positioning a site to the top level in the search engine result page which can serve as a great tool for SME’s (small and medium enterprises) and for local business owners along with startups. While undertaking various steps to ensure SEO for a particular website, blackhat practices must always be avoided as they may lead to a ban from the search engine. Backlinks must always be created on relevant websites and directories. Both on the page and off page search engine optimization techniques are important for better search results. And one should always remember that SEO is a long-term practice and thus never expect immediate results.
3. REFERENCES


