

# Improving Visibility of a Website Using Search Engine Optimization

Ayush Ruel Das<sup>1</sup>, Mihir Athale<sup>2</sup>

<sup>1,2</sup>*B.Tech Computer Science, Narsee Monjee Institute of Management Studies, Mukesh Patel School of Technology, Management and Engineering, Shirpur, India*

**Abstract-** Search Engine Optimization is modifying the website according to some specific rules defined by various search engines such that it can be shown on the home page of the browser, which is also called organic search. The main objective of SEO is to show up the website in the organic search. There are basically two types of SEO, On Page SEO and Off Page SEO. This paper aims to describe all the possible techniques of On Page and Off Page SEO and also helps to correctly apply them on a website to improve the visibility and overall performance of the website.

## I. INTRODUCTION

SEARCH ENGINE OPTIMIZATION is basically optimizing your website or a webpage or any other online content so that the search engine shows your website amongst the top searches also known as the organic search. Search Engine Optimization (SEO) is basically used by companies to display their product at the top so that they can get the required business out of the website or by blog writers so that they can deliver their posts to the interested audience. SEO can be done by numerous methods. We've given the different methods of SEO down below before talking you through the actual content so that you can get a brief idea what is actually coming through.

## II. TYPES OF SEO

SEO can be done by numerous methods. We've given the different methods of SEO down below before talking you through the actual content so that you can get a brief idea what is actually coming through.

### 1. Mobile SEO

As we all that use of mobile phones has increased rapidly during the past 5 years. So, to cope up with the same Google launched an update in its algorithm

called Mobilegeddon. Its primary task is to prevent the sites which are not mobile friendly to show up in the organic search. If your website is not mobile friendly then the search engine won't even consider showing your website on the top searches.

For all those who are thinking what a mobile friendly website is, let us just brief you through, that a website which adjusts its content like containers, images, text etc. is called a mobile friendly website.

In other words, if you use a website in your mobile phone you should be able to get a nice and perfect UI which allows full control over the website to navigate through it easily.

### 2. On Page SEO

- Title Optimization
- Body Text
- Meta Tags
- Image ALT Tag
- Outbound Linking
- URL Optimization
- URL Duplicity
- Robots.txt
- Sitemap
- Breadcrumbs
- Secure Server Certificate
- Dead or Broken Link Optimization
- Code Optimization

### 3. Off Page SEO

- Blog Writing
- Social bookmarking
- Local directory submission
- Directory Submission
- Image sharing
- Video submission
- Blog commenting

- Q & A Forum
- Press release
- Classified Add submission
- Internal linking.

### III. ON PAGE SEO

On Page SEO is optimizing the contents on your website to achieve the ultimate goal of ranking higher in the search result pages. But you also have to keep in mind that you provide quality content to the readers and not just stuffing the keywords to rank high. Let us now discuss the various techniques through which On Page SEO can be done.

#### A. Title Optimization

A Title Tag is an HTML element which is used to specify the title of the web page. Now you may be thinking how this tag can be optimized because a title is just the title. But no, my friend, the Title Tag plays a very vital role in the ranking of the website. Your website can rank 90% higher if your Title Tag is correct. Title length should be between 55-60 characters. It is recommended so because it will display the whole title properly in the result page.

Also, your title should start with your primary keyword and it should be very precise and to the point as your title is the first thing the reader will read. Very important point is write it for the readers or customers and not for the search engine.

#### B. Body Text

As we said before you have to keep the readers in mind. You are writing the online content for them. Then you also have to keep in mind the correct and proper use of keywords. The keyword density should be 2-5% of the total length of the content.

The total length of the content should be about 2000 words. This provides quality content for the reader and also tells the search engine that your website has got some really good content and hence this helps to show up in the search results. If your content will be long enough then the user also knows that you provide good quality content and it will explain exactly what you are trying to say and deliver the right message.

#### C. Meta Tags

When the user searches the query, the search engine firstly displays the title of your content, then the URL and then comes the text written in the Meta Description Tag. So, by reading this the user gets a glimpse of what you have got. Basically, the user is going to judge the content based on the description provided so you better not take this part so easy.

You are also going to instruct the robot or the crawler of the search engine that you want your page to be indexed and/or followed or not. You also specify the keywords which are relevant to your content and your page should be shown in the result page if any of the keyword has been searched for.

#### D. Image ALT Tag

Alt tag specifies what the image is about or what are you trying to say through that image or the function of the image. As the crawlers cannot read an image and hence these tags are useful for the crawlers to index the image and display the content as the things in the tags are searched. Content written in the ALT Tag is an add-on to the text you are writing. If your image is purely for design and does not support the text, then you should place that image in the CSS. If that is also not possible then keep the ALT tag empty.

#### E. Outbound Linking

Outbound links are the links that take the user to an entirely different site which contains some more relevant content that you want to deliver to the user. Make sure these links do not contain any unacceptable content such as a pornography. If this happens the search engine will right away ban your website and may never be able to put your website live again. These links increase the value of your content as you may not be able to provide the complete information to the user but you are providing him with the source where he can get the remaining content which may be left out by you. This improves your relevance and also increases your popularity which is very important to reach out to your readers or customers. There are basically two types of outbound links -

- Nofollow – These links tell the crawler that there is no need to index the page whose link you are providing and hence the crawler does not go to the link.

- Dofollow – These links tell the crawler while indexing the page that it should also index the page that you are linking.

#### F. URL Optimization

Firstly, you have to make sure that your target keywords come in your URL. Also, you have to make sure that you avoid ugly and tacky URLs.

Your URL should look like –

`http://yourdomain.com/target-keyword`

And what you should avoid is –

`http://yourdomain.com/987309835-somthingoddlikethis`

You should not use capital letters in your URL. Also, you should put your most valuable content in the root folder. Always use hyphen to separate words rather than underscore because Google does not read underscore. And off course you have to make your URL readable and short as possible.

#### G. URL Duplicity

When the user searches the query, the search engine firstly displays the title of your content, then the URL and then comes the text written in the Meta Description Tag. So, by reading this the user gets a glimpse of what you have got. Basically, the user is going to judge the content based on the description provided so you better not take this part so easy.

You are also going to instruct the robot or the crawler of the search engine that you want your page to be indexed and/or followed or not. You also specify the keywords which are relevant to your content and your page should be shown in the result page if any of the keyword has been searched for.

#### H. Robots.txt

When the crawlers of any search engine visit our website to index the pages, the first page they go to is this file called Robots.txt. Many people don't know this fact but this is indeed very important thing to keep in mind. In this file basically, we command the crawler and tell it which pages should not be visited by it.

You are also going to instruct the robot or the crawler of the search engine that you want your page to be indexed and/or followed or not. You also specify the keywords which are relevant to your content and your page should be shown in the result page if any of the keyword has been searched for.

#### I. Sitemap

As we discussed in the section above that the crawler visits the robots.txt file at the first place. Who doesn't want his work to be easy. So, to make the work of the crawler easy a page called sitemap is made which contains all the URLs of the pages you have in your website and the crawler is directed directly from robots.txt to sitemap which makes it very easy of the crawler to index the website. As a result, this helps us in ranking higher.

#### J. Breadcrumbs

Breadcrumbs shows the user the path followed by him to reach the current page from the home page. Breadcrumbs reflect the structure of your website both to the user as well as the crawler of the search engine. Using this feature also reduces your bounce rates as your website will be easy to navigate. You may use breadcrumbs to display some specific keywords in the current page the user is in. This also improves the internal structure of your website.

#### K. Secure Server Certificate

As security is a top priority for the search engines like Google so from 2014 it has been taken into consideration for ranking a specific website. You'll need to install a Secure Socket Layer certificate (the protocol that HTTPS uses) to ensure that data between your web server and browser remains private and secure. When an SSL certificate is installed on a web server, it operates as a padlock and acts as a secure connection between the web server and browser. None of the hackers can attack your website and do any harm to the private data that you have on your website.

#### L. Dead Link Optimization

Search engine simply disapproves any sort of dead or broken links and always looks for the correct links in your HTML. While having some of the dead or broken links is ok but many such links are not at all appreciated by the search engine. As we have already discussed in the custom 404 page section, how important it is to redirect the user to the correct page otherwise it affects the ranking of the website. This is also similar to it but this can happen because of the programmer itself, whereas the user can land onto a 404 page by typing in the wrong URL which does not even exists.

#### M. Code Optimization

Once you have completed to code the whole website or if you are the owner and your website is ready, then you need to compress the code. This can be done by removing all the indentation, spaces, comments and unused code.

When the search engine scans for a keyword, it does so in the HTML code of the website. So, the CSS and JavaScript written before the HTML makes the search engine's task difficult. Hence, CSS and script should be placed outside the main document by linking it to the HTML file to get the results fast. This in turn helps you to rank high.

Apart from the CSS you also need to optimize the HTML code. This is also done in the similar fashion as CSS. You need to remove all the commented code that you tried out but never actually used in the main content.

### IV. OFF PAGE SEO

As we have discussed so far, all these techniques are done on the website. Off page SEO is doing some stuff outside your website which ultimately results in a higher rank for your website. This something is actually backlinks. Now, what are backlinks and how it helps us to rank high?

So, the answer is, backlinks are simply the incoming links to your website. When do follow the things, we are about to tell you will create huge number of backlinks. This helps in ranking high as the search engine comes to know that your website has got some quality content and hence ranks your website high.

#### A. Blog Writing

Writing blogs in your website is very important to keep your readers or customers updated of what's going on and what's coming new. This also tells the search engine that you have enough content and you keep on updating your website. It also increases your popularity rank. You can also link to one of your other posts if required, this improves your internal linking as well.

#### B. Social Bookmarking

Social bookmarking is basically posting a specific link of your website in any of the social bookmarking site with proper title and description. You also need to make your profile in these websites and provide complete and correct information. So when the

crawler indexes the social bookmarking site it also indexes the link that you posted and hence this gives us a backlink and also boosts up the keywords you posted. The only thing you need to keep in mind is the social bookmarking site should be a "Dofollow" website.

#### C. Local Buisness Submission

Directories catalogue links for easy access to users. Earlier there were basically directories, to which people used to refer to get websites of different categories. In today's time we usually don't look up a directory to get new websites rather we just search on some search engine to get direct result. And apart from submitting your website to a directory you cannot expect much traffic. But obviously you will improve the rank of your website and a better chance to show up in organic search. Your submission will be viewed by an actual person who determines how relevant and unique your website is. After passing his scrutiny and editing, your website will be accepted in the directory. This automatically establishes the credibility of your website; hence search engines will consider links submitted to directories.

#### D. Web Directory Submission

The basic difference between Local directory submission and directory submission is that in local directory submission we focus on the details of your company like your address, working hours and days etc. whereas in directory submission we focus on keywords. The directory submission sites does not ask for too much of your detail. You just need to login and post the link with proper title and description.

#### E. Image Sharing

Image sharing is also a way of getting backlinks. This can also be done promotionally. You can share some coupons that your company is offering and write a good title which attracts the reader to continue and visit your website from the link you have provided. There are many image sharing sites such as Ingur, Tumblr, Flickr, ImageShack etc.

#### F. Video Sharing

This is very similar to image sharing. You just need to get a video ready from your graphics team. This video should be original and should not contain any

questionable content. Since all the video submission sites have high domain authority and page rank hence your submission adds extra value to your website. Some of the video sharing sites are Vimeo, MySpace, Atom etc.

#### G. Blog Commenting

As the name itself suggests that you have to comment in others blogs. Now these blogs should be relevant to your website. For ex if you are a travel agent and have a website for bookings then you should comment on some travel blogs. You also need to make sure that the comments are not irrelevant. You have to start by greeting the writer of the blog for ex "Hi Sam". The comment should create a bonding between the writer and you. You can also ask some questions or can share some personal experience.

#### H. Q & A Forum

This is another way of getting backlinks. There is lot of discussion going on about so many different topics. So, you need to find out a relevant topic according to your business and find a forum for that. Then you need to analyse the situation and make an answer of about 4-5 lines and post it to the forum. Forums are also very reputed and hence will help us to rank high.

#### I. Press Release

Through press releases you can tell the customers what's coming up next and what is actually going on in the company. This shows that the work in your company is transparent and you are very legit. Also creates a bond between you and the customer.

Press release does provide direct as well as indirect value. But the direct value is less likely to be seen. It is possible if your press release is shown in the news section of Google which is very difficult but if this happens it will generate organic traffic for your website. While the indirect value can be seen when you post some quality content in press release and some newspaper or media outlet finds it interesting and worth giving a shot. They will publish your release and you will get citation, buzz and referral traffic for your website.

#### J. Classified Ad Submission

Classified ad submission is first party submission. You will have to make an attractive title and

description of the product that you are selling and find some good sites where you can post it. People prefer these websites over searching here and there for the product they are looking for as these websites are reliable and will only approve your submission if they find it appropriate. So, choose your word wisely and try to gain the trust of the reader or customer that he may be forced to check out once what the product actually is. Some of the good classified ad submission sites are backpage, Classifiedads, Adpost etc.

#### K. Internal Linking

Internal linking is exactly what you are thinking by reading the word itself. You need to link all the relevant pages of your website together. This keeps the reader on your website for a longer time or a longer session. This will also structure your website and in return will tell the crawler that all these pages are linked so have got some really great information on your website. And also which pages on your website cover similar subject matter. Google deems a page that gets lots of valuable links as more important, you'll increase the chance of that page ranking high.

### V. CONCLUSION

We have seen various techniques of Search Engine Optimization which we can apply to the website so that it's overall performance and ranking can be improved. But this is also to be kept in mind that this takes a lot of time. You have to be very patient and continuously work on the website as it is a long-term process. If proper steps are followed, the ranking of the website can be improved in a time period of 6 to 9 months. If you rush too much then your website may be banned by the search engine and you may never be able to get it live again. Hence, we can conclude that Search Engine Optimization is a cost-efficient way to optimize your website and make it popular, as we don't have to pay any third party for digitally advertising the website.

### REFERENCES

- [1] C. Zhao, J. Lu and F. Duan, "Application and Research of SEO in the Development of Web2.0 Site," 2009 Second International Symposium on

- Knowledge Acquisition and Modeling, Wuhan, 2009, pp. 236-238.doi: 10.1109/KAM.2009.69
- [2] Wu Di, Luan Tian, Bai Yan, Wei Liyuan and Li Yanhui, "Study on SEO monitoring system based on keywords & links," 2010 3rd International Conference on Computer Science and Information Technology, Chengdu, 2010, pp. 450-453.
- [3] X. Zhu and Z. Tan, "SEO Keyword Analysis and Its Application in Website Editing System," 2012 8th International Conference on Wireless Communications, Networking and Mobile Computing, Shanghai, 2012, pp. 1-4.
- [4] Jing Shi, Yan Cao and Xue-jing Zhao, "Research on SEO strategies of university journal websites," The 2nd International Conference on Information Science and Engineering, Hangzhou, 2010, pp. 3060-3063.
- [5] B. Bian and J. Yuan, "The SEO strategy research of e-commerce sites of SEMs," 2011 International Conference on E-Business and E-Government (ICEE), Shanghai, China, 2011, pp. 1-5.
- [6] M. M. Shafiee, S. Rahimzadeh and R. Haghhighizade, "The effect of implementing SEO techniques and websites design methods on e-tourism development: A study of travel agencies e-tourism websites," 2016 10th International Conference on e-Commerce in Developing Countries: with focus on e-Tourism (ECDC), Isfahan, 2016, pp. 1-8.
- [7] Fuxue Wang, Yi Li and Yiwen Zhang, "An empirical study on the search engine optimization technique and its outcomes," 2011 2nd International Conference on Artificial Intelligence, Management Science and Electronic Commerce (AIMSEC), Dengleng, 2011, pp. 2767-2770.
- [8] M. Yunfeng, "A Study on Tactics for Corporate Website Development Aiming at Search Engine Optimization," 2010 Second International Workshop on Education Technology and Computer Science, Wuhan, 2010, pp. 673-675.
- [9] J. B. Killoran, "How to Use Search Engine Optimization Techniques to Increase Website Visibility," in IEEE Transactions on Professional Communication, vol. 56, no. 1, pp. 50-66, March 2013.