

Study and Analysis of Search Engine Algorithms

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Abstract— Search Engines are essentially used to search for any information across internet. The main essential motive of any website or web page is to show up at the top of the search engine when any client search the related data that is in their website content. There are different elements that influence the websites rating and dives them to the top rundown of the search crawler and a few sites in spite of have the best content never gets into the search engine top list. This specialty of enhancing a sites visibility in the body of search engines result is known as Search Engine Optimization. In this paper, we will compare the various algorithms that affect Search Engine Optimization process and perform the comparative study.

Key words: Search Engine, SEO

I. INTRODUCTION

Search Engine Optimization (SEO) known as is the craft of enhancing a websites visibility in the main (natural/organic) body of search engine results. SEO helps search engine to give most astounding positioning to a specific site so it could be appeared at the highest point of search engine result page in response to user search query. And the sought information must be significant to user search query. On the off chance that a site get place at top of results then there are more odds of user going to that site. To do so, such sites utilizes number of advancement techniques. Despite the fact that search engines use many algorithms and techniques to produce the outcomes on time, it is hard to crawl billions and billions of pages. To help the search engines recover the outcomes speedier the site designers use numerous website improvement strategies.[1]

Conceptually, there are two methods for doing SEO:

- On-Page SEO: On-site optimization concentrates on factors affecting the website to do with its hosting, structure, accessibility and content.[3]
- Off-Page SEO: Off-site optimizations factors are all to do with links and how well integrated the users are into the networks online.[2]

II. SEARCH ENGINE ALGORITHMS

Search engine algorithms are based on a straightforward reason: searchers need a result for their queries. For any pursuit, there are hundreds or thousands of websites that offer a potential connection or insight related with the query. Therefore, search engines need to accomplish three objectives:

- Preclude all the sites that aren't relevant.
- Return a rundown of sites that are relevant.
- Rank and organize those sites all together of significance, to recognize which sites are the most relevant.

Since no single factor is adequate to give these bits of insights, Google and other search engines use complex algorithms that blend dozens of factors. The careful recipe

isn't known, yet a scope of subjects are considered. These include:

- Link authority: number of incoming links, quality of the sites, anchor text used.
- On page factors: such as title tags, responsive mobile design, page loading speed.
- Brand measurements: hunt volume down the brand, brand notice, references of brand name regarding particular keywords.
- Content: quality and profundity of content, recurrence of new content updates, reads and shares on Social Media.

A. Google Panda

Google Panda is a change to Google's search results ranking algorithm that was initially discharged in February 2011. The change planned to bring down the rank of "low-quality sites" or "thin sites", and return higher-quality sites near the top of the search results. Panda began the ball moving on the content discourse, concentrating on wiping out lowquality or thin sites for those with inside and out, consistently overhauled content. Panda likewise handled sites with a lot of advertising and poor navigation, when business increases were unmistakably organized over user experience. Since Panda, content promoting has expanded in notoriety with an emphasis on blogging, on-site content, working off-webpage content resources through practices like visitor blogging, and social media participation.[5]

In July 2012, Google gave a progression of inquiries to help website admins assess whether their sites were in accordance with the search engine's quality rules. Exploring these inquiries gives the best sense of the sorts of issues Panda addresses, and the sorts of infringement that are prone to cause site harm. makers, alternately spread over a large network of sites, with the goal that individual pages or sites don't get as much consideration or care?

B. Google Penguin

Google Penguin was the search engines reaction to supposed "black hat" SEO strategies for link building, which was initially discharged in April 2012. Various upgrades have been taken off from that point forward. Manipulative external link establishment methods that concentrated on link building through "link schemes" were focused on. These included purchasing links, building thin sites basically with the end goal of linking back to a main site, trading links, comment spam links, and comparative strategies.[6]

The period of Google Penguin has required site proprietors to take a much harsher perspective on link building. Every site, maybe without precedent for the historical backdrop of SEO, is relied upon to know and own its site link profile. The volume, quality, source, and contents of links eventually tumble to the site's proprietor. On the off chance that questionable practices are identified, site

proprietors might be required to review their whole link profile and work to have low quality links expelled.

C. Google Humming Bird

Hummingbird strengthened everything that had been done through Google Panda and Penguin, yet included two particular dimensions. Reported in late 2013, Hummingbird presented the significance of cell phones to search. Surprisingly, mobile responsive designs plainly have tackled expanded significance. Numerous has contended that its likewise basic to have a mobile content strategy: that is, to accept that readers will get to your contents from an assortment of gadgets including smartphones and tablets and making your content with mobile-first mindset.

The second, and maybe all the more energizing, segment of Hummingbird was the presentation of contextual search. Until Hummingbird, search engines ordinarily interpreted queries utilizing what it distinguished as the most imperative keywords from an search. But, with Hummingbird's presentation, Google has started to take a gander at the relationship between terms to interpret context.

Many considered Hummingbird a characteristic advancement both of Google's development and of the proliferation of mobile devices. In the wake of being good to go for a long time, Google's built up a staggeringly rich and refined Knowledge Graph (or real database of all the data that it's gathered). As more clients search on mobile phones, searches are developing from short keyword driven inquiries to being structured the way we normally talk and make questions. Hummingbird is helping to ensure that Google is ready to comprehend and take care of that demand.

III. COMPARATIVE STUDY

We have made Two Blogs to break down the impacts of the Panda and Penguin SEO Algorithms on the Traffic of the Blogs. The Blogs are made on Wordpress and Blogger.

- 1) <http://www.greenhandle.in/blog/>
- 2) <http://greenhandle.blogspot.in/>

Name of Blog	Dates	Targeted Algorithm	No of Visits
http://www.greenhandle.in/blog/	25-May-2016 to 31-May-2016	Panda	11
http://greenhandle.blogspot.in/	25-May-2016 to 31-May-2016	Penguin	42
http://www.greenhandle.in/blog/	1-June-2016 to 7-June-2016	Panda	17
http://greenhandle.blogspot.in/	1-June-2016 to 7-June-2016	Penguin	73

Table 1: People visited on blog.

On the First Blog, We have implemented the Concept of the Panda Algorithm i.e. No Duplicate Content. On the Second Blog, We have implemented the Concept of the Penguin SEO Algorithm i.e. Quality Backlinks.

Here are some Research Methodologies on which this Research will be engaged:

Keyword Research: First Objective was to pick the Low Competition Keyword with the assistance of Google Keyword Planner Tool to get the quick Indexing in the Google Search Results.

SEO Tools: Find the Online SEO Tool Package i.e. www.smallseotools.com to actualize the variables of both Panda and Penguin Algorithms.

Plagiarism Checker: To Implement the Panda's engaged element, use Plagiarism Checker of the SEO Tool Package to Check the Duplicity of the Content.

Backlinks Checker: To Implement the Penguin's engaged element, Use the Backlinks Checker Tool of the Small SEO Tools Package to check the Quality of Backlinks that were made on the Blog.

Traffic Analysis: Compare the Panda's and Penguin's Factors impact on the Blogs Traffic i.e. Number of Views and Conclude the Final Result.

IV. CONCLUSION

An imperative part of Search Engine Optimization is making your site simple for both users and search engine robots to get it. In spite of the fact that search engines have turned out to be progressively refined, from numerous points of view despite everything they can't see and comprehend a site page the same way a human does. SEO Analyzer helps the motors make sense of what every page is about, and how it might be valuable for users. Some place between 80-90% of user now check online reviews before making a buy, and this number is just anticipated that would increment. It won't be much sooner than for all intents and purposes everybody is looking for items and services on the web. Without SEO set up, individuals will have a hard time discovering you and the business and will rather discover your rivals. SEO Analyzer will help these pages to be more search engine optimized and consequently it will be advantage for expanding the activity on the site and henceforth the business will likewise increment.

We have presumed that the Penguin Algorithm works superior to the Panda Algorithm by giving approx. 80% better Results in the terms of movement. So the Web Masters ought to concentrate on the Link level SEO than the Content level SEO as it can help them to get build the SERP of their Blogs or sites.

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