Comparative Analysis Of Various Google Algorithms And Their Effects On Performance Of A Web Portal

Deepak Goyal
M.Tech Scholar

Dinesh Goyal
Associate Professor
Suresh GyanVihar University

ABSTRACT: With the expansion in the World Wide Web day by day the people generally rely on search engines to find relevant information. It is the duty of Search Engine to provide appropriate and quality information to the user against their query submitted. The challenge is to provide relevant information in real-time using the hyperlinks and web page contents and list them accordingly.

At the moment of this write-up Google is the most popular search engine, updating/launching its various algorithms to filter only quality information content and hyperlinks.

The Google algorithm change has given rise to a lot of hypothesis as marketers worry about how it will affect their marketing efforts and their business at large.

This research is being done for analyzing and comparing the web page ranking algorithms based on various parameters and results to find out their advantages and limitations for the ranking of the web pages. We have worked on two algorithms used by the popular search engine Google to list a web page, Panda and Penguin. Panda is a content filtering algorithm which searches the websites with duplicate content and penalizes them by listing them last in response for similar query parameter. Alongside Penguin is a linking based algorithm which filters the websites with highest & high quality links with relative information.

The process optimizing the web pages so that they result higher in search engine results is termed as SEO. We targeted two web portals to increase their views by optimizing their code and information. For every week we targeted each portal to the above algorithms in order to increase/decrease their visibility to search engine. The results based on comparisons are then used to conclude the better of two algorithms for quick and stable increment in web page ranking.

Keywords: SEO, Off-page, On-page, Panda, Penguin.

1. Introduction

SEO means,Search Engine Optimization : It is a process of optimizing the web pages so that they result higher in search engine results. It is a collection of rules and techniques focusing in driving more traffic from the search engines.[1]

Conceptually, there are two ways of doing SEO

- **On-Page SEO**- This contains providing worthy keywords selection, worthy content, placing keywords on right places, giving proper title to each page etc.
- **Off-Page SEO** - This contains increasing link popularity, link building by submitting in open directories, link interchange, search engines etc. [2]

SEO is a part of Internet Promotion. It is categorized into several types, Similar to **Search Engine Optimization** (**SEO)**, Social Media Marketing (SMM), Affiliate Promoting, SEM Search Engine Marketing (SEM), etc.

Of all the above SEO is the cost effective process of increasing the popularity of the webpage. This is the method of optimizing the web pages search engine kindly. That means while we search the query in the search engine we make our web page to be listed in the upper of the all the search effects. We enhance it for the selected keywords, so that every time a selected query search or keyword search is done our web page should be listed in the best 10 results. SEO is the legal method of optimizing the web page. This is done using OnPage and OffPage Optimization techniques. [3]

Google is the most popular **Search Engine** and monitors strict rules in displaying the Search Engine Result Page (SERP) results query search results, therefore we concentrated on enhancing webpage for greater Page Ranks in SERP.

What is Search Engine Rank?

When we search any keyword using a search engine then it shows thousands of results initiate in its databank. A page ranking is calculated by the position of web pages shown in the search engine results. If Search engine is placing your web page on first position then your web page rank will be number 1 and it will be assumed as with a high rank and vice-versa. [4]

Google Algorithms

Google till now updated the following various algorithms:

Algorithm Updates:
1) Google Panda (till now 25 versions)
2) Penguin (till now 4 versions)
3) Exact Domain Match Update
4) Top-Heavy Update
5) Pirate Update
6) Vince Change
7) 7 SERPS Update

In these updates mainly here we will compare Panda and Penguin Algorithms only because these are very much competitive algorithms, launched by the Google.

Each year, Google modified its search algorithm up to 500 – 600 times. Whereas most of these changes are negligible, every few months Google rolls out a "major" algorithmic update that affects search results in important ways.

For search marketers, knowing the dates of these Google updates can help describe changes in rankings and gradual web portal traffic. Below, we've listed the major algorithmic changes that made the biggest impacts on search. [5]

Algorithms are as follows:
- Panda &
- Penguin

Google has announced a new Algorithm refresh that is Panda, making this version number 25.
Google is launched its new update on this 14 march.
Google has also announced its latest refresh that is Penguin, making this version number 4.
Google is launched its new update on this 22 May.

Panda (Content Level)

Panda affects sites that pass a threshold for low-class or duplicate content on your site. If our website is punished under one of the Panda updates then the prime issue you should be focusing on is on-site content i.e. to eliminate or replace any content that is redundant, poorly written, or that does not do a decent job of resolving problems for visitors.

Panda does not attack sites directly because of links. If our own site has only high-quality content and it is affected by a Panda update, this is because a large percentage of our links originated from sites with low-value content. In other words, the sites that connected to you were smash by Panda, which prepared those links less valuable. [6]

Penguin (Links level)

Penguin was formerly known as the web spam algorithm update. Google targets the websites that are spamming the Web and throws them out of the search results. There are some cases were you can be impacted by these updates without being completely removed from the search results. This usually happens if you are linked to by spammers, but not measured a spammer ourselves.

Proposed Work

We have done SEO (Search Engine optimization) on two web portals
1. http://education.itwebblade.com &
2. http://www.bollywoodfunda.com

On itwebblade we worked for 2 web pages keywords
(i) GyanVihar University Previous year papers
(ii) Itwebblade

On the bollywoodfunda we also worked for 2 web page keywords
(i) Bollywood funda
(ii) India's biggest Bollywood entertainment website

And we did SEO keeping in mind the Google algorithms (Panda & Penguin).
Our main aim is to put our websites higher in SERP and also to avoid Panda and Penguin attack on our portals.
Before SEO our website traffic was very low and our site was penalized (spammed) because of content and links in recent past

If we take our research work on http://education.itweblade.com the Average visits per week before SEO was approximately 10- 12 which were quite low.
The number of visits got hiked by 85% - 86 % when the code was optimized on regular basis.
We also calculated our search traffic that, from where this traffic comes? Is this traffic is Direct Traffic or Searched Traffic or Referral traffic.
After continuous SEO on alternate week basis, both Content based and Link based we observed some great results.

Another Portal we worked on was http://www.bollywoodfunda.com for which the Average visits per week before SEO was approximately 70- 75 which after the SEO got increased by 80 percent suddenly.

Results:

Name of website	Date	Targeted Algo	Visits	Search Traffic (%)	Referral Traffic (%)	% Change
Itwebblade.com	01 April – 07 April	Penguin	72	50	6.94	+86.11%
Itwebblade.com	08 April – 14 April	Panda	75	52	8	+4%
Itwebblade.com	15 April – 21 April	Penguin	227	59	8.4	+66.96%
Itwebblade.com	22 April – 28 April	Panda	386	56	5.4	+41.19%
Itwebblade.com	29 April – 05 May	Penguin	195	63.1	4.1	-97%
Itwebblade.com	06 May – 12 May	Panda	134	56	9.7	-45.52%

Table 1.1: People Visited http://education.itwebblade.com

We also calculated our search traffic that, from where this traffic comes? Is this traffic is Direct Traffic or Searched Traffic or Referral traffic.

In this site we seemed that Referral traffic is much higher than the Search traffic.

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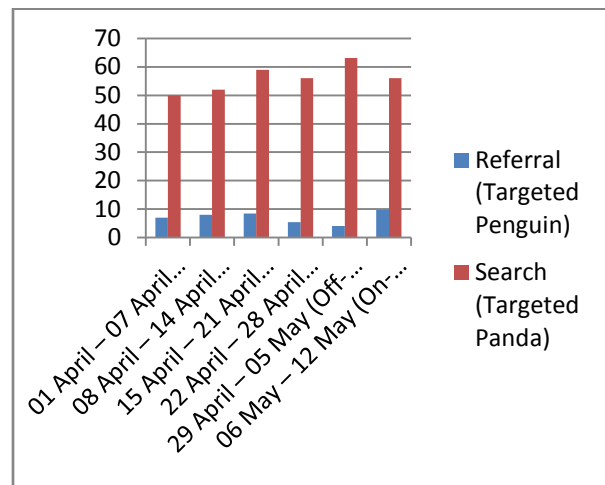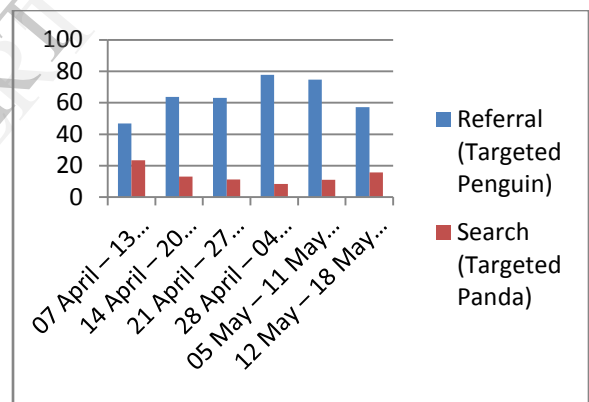

Fig 1.1: Referral and Search Traffic on http://education.itwebblade.com

Fig 1.2: Referral and Search Traffic on http://www.bollywoodfunda.com

Name of website	Date	Targeted Algo	Visits	Search Traffic (%)	Referral Traffic (%)	% Change
Bollywoodfunda.com	07 April – 13 April	Penguin	363	23.4	46.8	+80.71%
Bollywoodfunda.com	14 April – 20 April	Panda	409	13	63.8	+11.24%
Bollywoodfunda.com	21 April – 27 April	Penguin	269	11.1	63.2	-52.04%
Bollywoodfunda.com	28 April – 04 May	Panda	225	8.4	77.8	-19.55%
Bollywoodfunda.com	05 May – 11 May	Penguin	229	10.9	74.7	+1.74%
Bollywoodfunda.com	12 May – 18 May	Panda	178	15.4	57.4	-28.65%

Table 1.2: People Visited http://www.bollywoodfunda.com

Conclusion:

We found that the Searched traffic was much higher than the Referral traffic for ITWEBBLADE.COM. After continuous SEO on this portal we found that for this website the Link level SEO worked better than the Content Level SEO.

On the Bollywoodfunda.com we seemed that Referral traffic is much higher than the Search traffic.

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