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On-Page Search Engine Optimization (SEO) Techniques Model: A Use Case Scenario of a Business Entity Website

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Abstract: ***The Internet is getting an important and crucial part of our daily life. No matter whether we are a business entity, a customer, a researcher, a scientist, a student or a normal end user etc., we encounter with the need of data which is required for certain processes to get going as per our role and requirements. Normally, the chief source of data which is gathered by different users is done through search engines. According the data obtained through google, on any normal day around 40,000 search queries are processed per second by google search engine only, which makes around 3.5 billion search queries per day. Thus, it can be clearly deduced how challenging it can be for search engines to return search queries results to users quickly and efficiently. On the other side, it is also challenging for individual as well as businesses site-owners to optimize their websites and web pages so that they may be able to reach more people on the internet through search engines. Furthermore, the website-owners need to adapt certain procedures so that their website may become visible to search engines organic or unpaid results, which is known as Search Engine Optimization (SEO) (Ross and Malaga, 2007). It is proved method that search engine optimization depends on website design that whether website is search engine friendly or not. Additionally, site may have additional things such as content may have rich text and proper heading styles and keywords may be used correctly formatted (George and Greece, 2010). This research paper is focused on increasing traffic on a site using on-page SEO techniques, as a use case scenario www.aliinbox.com web portal has been utilized; second objective is to see whether searchers get relevant content or products on Aliinbox.com. This research study will help SEO researchers to get comprehensive description of on-page SEO techniques model along with its implementation in a web portal where all on-page SEO technique model theoretical components have been applied.***

Keywords: On-Pages Optimization, SEO, Website promotion, SEM, online Information

I. INTRODUCTION

It is one of the chief concerns of online businesses to have their presence noticed by as many people/customers as possible. Generally, online businesses interact with public or potential customers through their websites. This in turn gives them a lot of traffic/online visitors (13). In this research study On-Page Search Engine Optimization (SEO) optimization techniques are used to get their webpage/website's pages achieving high ranking in the different Search Engines (SE) through paid placement of ads & SEO on-page techniques. To convey about my concept I present here in the concept of three linking rings as it applies to SEO.

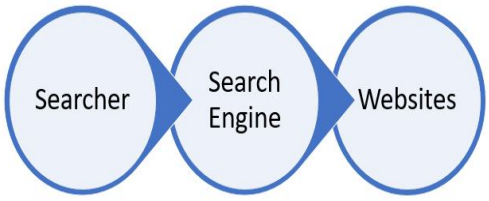


Figure 01: Three basic linking ringof SEO

Fundamentally speaking, search engines works in the middle of searcher and a website. For a user to get/search the desire contents on the Internet, they have to go through the search engine layer. This concept has been depicted in the Figure 01. The main idea behind the figure is to demonstrate readers the basic working of search engine positioning in the clearer way and to help understand clearly the difference between search results and organic /natural search query results. In this research study, a feedback mechanism

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of fundamental algorithms relating with on-page SEO has been examined. Additionally, in this research paper, on-page optimization techniques for a common person have been introduced, compared and analyzed to understand and to learn an easy method to develop SEO friendly websites. Generally, it is believed that SEO techniques are applied to work more efficiently and to perform a thorough analysis of search visibility of any website (Alexandra, 201). Additionally, this results in an increased gain in a huge traffic. Since, the short side of existing SEO techniques is its performs which only covers a specific function in the SEO work flow. Resultantly, several SEO tools are required to perform SEO on a single website because no single tool has the capacity to perform the breadth of functionality required by SEO specialists. Within the scope of this research paper, a search engine friendly website (commercial business orientated website) using Blogger website and on-page SEO techniques have been developed (Lalit and Naresh, 2014). Furthermore, new SEO on-page optimization techniques have been utilized to successfully achieve better ranking and healthy traffic on a website.

II. METHODOLOGY

In the following an SEO model architecture and its implementation has been depicted and described in detail. SEO Web Application Architecture Model (Figure: 02 Architecture Model) was deployed on linux server. Additionally, Apache web server is installed on Linux. Apache webserver helps WordPress and Php along with MySQL to work efficiently on Linux server. Browser, communicates with WordPress and a business entity called www.Aliinbox.com to convey details placed on business website.

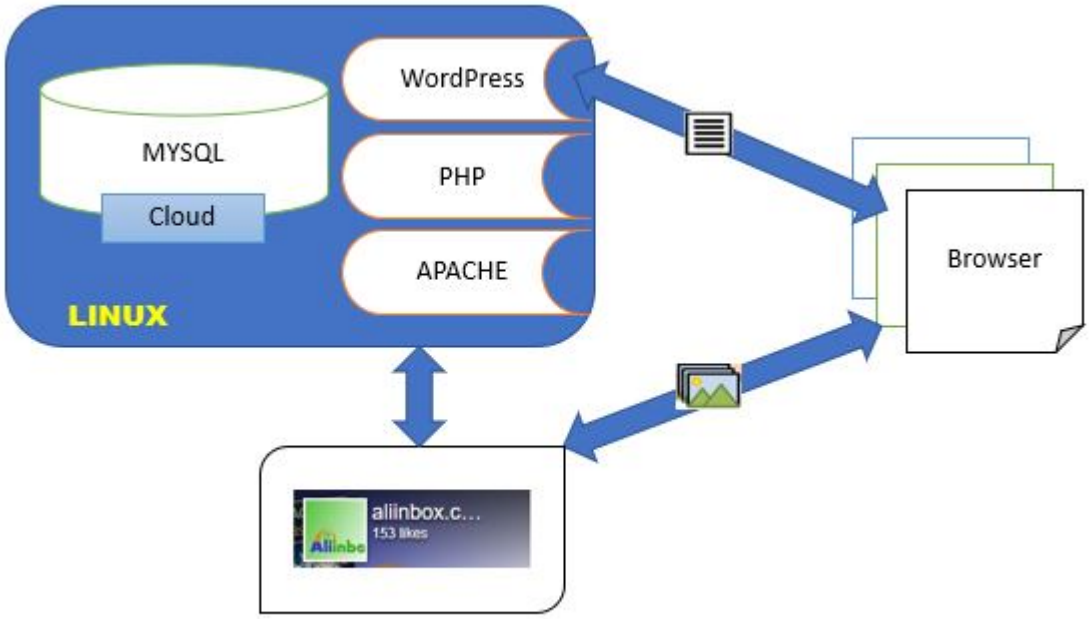


Figure 02: Figure SEO Web Application Architecture Model

Fundamentally, the Word Press platform has been utilized for the content management system and web application architecture prototype model. WordPress (CMS) is open source platform, everyone can use free on a hosting server, and also everyone can install and configure easily. It is easier to develop search engine friendly site or a blog. Additionally, it is simple to update any time or on daily basis. Furthermore, using a WordPress plugins are very easy and intuitive. In WordPress, one can use a lot of security plugins and database authentications, also user control and admin rights and post management are added advantage of this utility. This all has given a motivation to use WordPress (CMS) for this research work and my research project known as www.aliinbox.com. Additionally, www.aliinbox.com serves as a business platform which contains google monetization. New businesses get their products published on ali inbox to get more traffic and publicity on the Internet.

A. Google Seo Techniques Model

Google thoroughly defined SEO steps in google official guide (Google, 2010). These guide servers as an important starting point. In the following a summary of Google SEO model has been shown and discussed. The basic version of SEO Techniques model contains SEO Key points. SEO key points are further divided into the SEO on-page optimization and SEO off-page optimization.

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Since, lots of SEO companies provide on-page optimization services (Nursel and others, 2010). Additionally, it is common that companies hire an skilled SEO professionals for conducting on page optimization for their website.

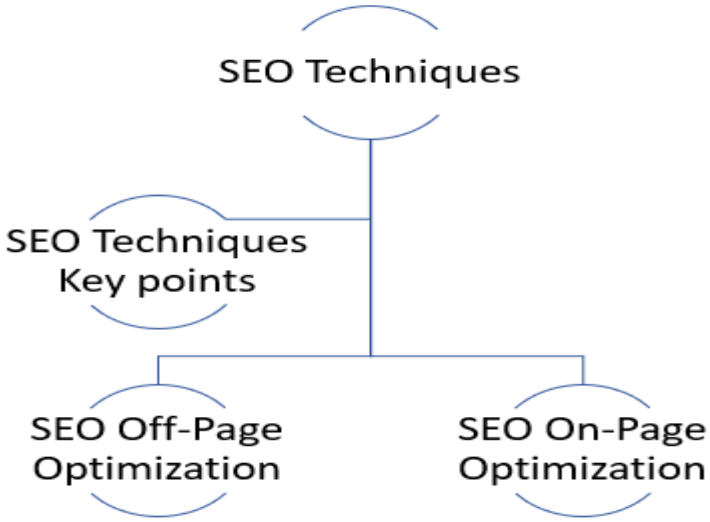


Figure. 03. SEO Techniques Model Diagram

In Figure. 03 the world-famous SEO model known as Google SEO model is presented and enhanced in this research study. This model is based on SEO On-page optimization. In this section, further sub categories such Site Hierarchy, website domain name etc. in on-page section of SEO model has been described. Similarly, Off-page section contains sub categories such as link building, reciprocal linking, etc.

B. Google On Page Optimization Model

Fundamentally, SEO techniques model is based on SEO on-page and SEO off-page optimization. These optimization techniques are fundamentally, connected to SEO key points. Furthermore, google separately defines on-page optimization techniques model also known as on-page SEO (Gokhan, Coskun, 2014). The starting point of on-page optimization is website hierarchy also known a tree structure. The details steps of the Google on-page SEO are presented in the following. Additionally, Figure. 04 presents Google on-page SEO model.



Fig. 04. Most famous Google On-Page Optimization Model

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Mostly, on page optimization is the method to optimize a website in-depth. Optimize URL, website content, images, title, descriptions and keywords.

1) Website hierarchy (Tree Structure)
2) Domain name selection
3) Paging name
4) Meta data site title
5) Meta data site description
6) Meta data site keywords
7) Targeted URL addresses
8) Heading tags
9) Image alt
10) Content writing
11) Website navigation
12) Website map
13) Robot meta tag

C. In the following Google on-page optimization SEO components are described in detail.

1) Website Hierarchy (Tree Structure):



Fig.05. Website Architecture Model

In Figure 05. A website hierarchy contains basic architecture of a website and how pages are interlinked with each other. There inter-relationships are defined in website hierarchy component.

2) *Domain name Selection*: It is very essential to use a key word in domain name. SEO experts always suggest to must use keyword in domain name, regarding your website product. This means whatever is being planned to sale or buy an associated key word relating with that product may be used in the domain name.
3) *Paging Name:* Majority of SEO expert consider Page name as an important component of SEO. A common mistake that most of SEO developers make is they use page name like: index.html, about. Html, content.html. Conclusively, in terms of SEO they may be considered wrong. Rather, a website keywords may be used in a page name.
4) *Meta Tag Title:* Following are the suggestions relating with meta Tag title.
a) Not to use short title
b) Low competitive Keywords
c) Title must be used of 60 characters.
5) *Meta Tag Description:* It is strongly suggested that 60 characters may be used as a description. Furthermore, within description only the most important keywords may be used. Additionally, a description of a site may be very informative and should contain key words (Timothy *C. Craven, 2003*).

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6) *Meta tag keywords:* An important aspect relating with the meta tag keywords is that they can be used from the best words from page contents. It is recommended to use 4 to 6 keywords in this tag.
7) *Targeted URL Addresses:* It is important to use Relevant URL to the keywords
8) *Heading Tags*
   1) Using very important head line regarding your website
   2) Must use heading in H1
   3) H2, H3 heading tags may be used in sub heading
9) *Image Alt:* Use image must be used in image title and alt tag Google search engine accept Alt tag
10) *Content Writing:* Content writing is an important factor in SEO

Content of a website must be of good quality and must be unique
Content should contain important keywords
Content must be relevant to the services
Content should contain internal and external links

11) *Website Navigation:* Search engine friendly website may definitely have attributes through which a user may be able to navigate through site and within search engine internal links ranging from left or right side simple menus and text links. Results of search engine navigation links are of two types, which are horizontal results and vertical results. A user can navigate links in footer page, right side, left side, and internal links.

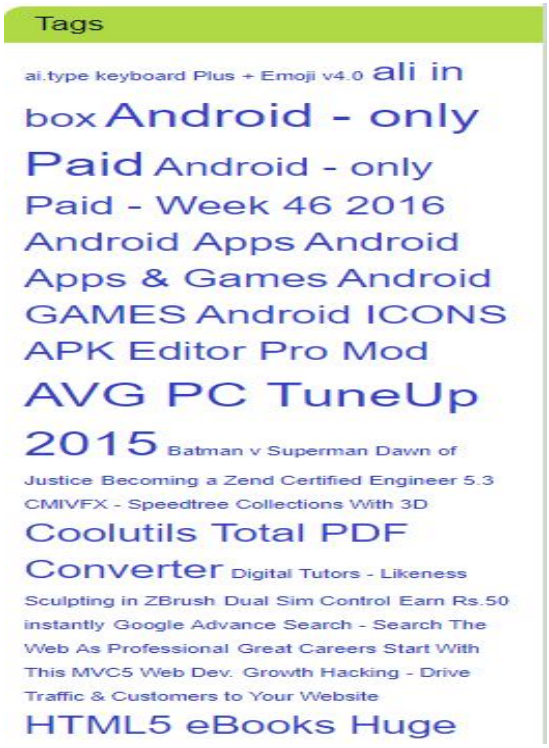


Fig. 06. Website Navigation

D. A few guidelines Figure 06. are presented in the following:

1) Navigation/ categories
2) Navigation types
3) Search & form submit
4) Tagging
5) Alpha & date range
6) Subject matter categories
7) Multiple navigator formats

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E. Website Map

For a website, it is necessary to have search friendly resources. Apart from this a design may contain a page which contains sitemap, where a user may get site details on just one click. Additionally, links to higher categories may be well defined.

F. Robot Meta Tag

Robot Meta tag is considered a very important aspect in SEO, It depend on two important parts.

III.SEO ON-PAGE TECHNIQUES

There are three major SEO techniques which are described in detail in the following.

A. White Hat (Techniques)

There are many SEO techniques which help your website ranking promotion in different ways, due to unknown right knowledge certain SEO techniques brings you finish up with bed result

There are top ten White hat techniques Figure 07.

1) Website Content "Quality of content should be maintained"
2) Google search engine likes indexing and quality articles
3) To write title, description, keywords, (Meta tags)
4) To write good keywords regarding your website, and Alt Tag
5) To keep open access for authors come your site login and publish their post, (best way to get more traffic)
6) To apply semantic method (Engine understand your website content)
7) To develop Relative Content (links related to your website, to attach more related hyperlinks results more traffic)
8) Content Sharing (share your site content or post at different social network,
9) CSS usage (play major role between two articles)

B. Black Hat SEO

Black Hat SEO consists of uncompromised SEO methods Figure: 08. Therefore to plan to achieve constant understanding depends only on search engine and not on the Internet user, since going against this usually violates SEO rules (Patil Swati P. and others, 2012). This technique is most often used by those who are interested in bringing more amount of traffic on their website.Black Hat key points are described in the following:

1) Hidden Text "just understood by search engine"
2) Keyword using "using best keyword regarding your site content"
3) Links " Spamming form index in search engine"
4) Spam Blog
5) Scrapping

C. Grey Hat SEO

This technique works as its name suggests. Normally, this technique is used in middle of the black and white techniques. In SEO practice, this is very effective technique. Grey Hat key points are described in the following:

1) Buy old domain
2) Duplicate web content
3) Buying lin
4) Social media followers

IV.RESULT

To verify the hypothesis of this research work, a project relating with SEO in the form of a website named www.aliinbox.com has been implemented. Additionally, every aspect of the on-page SEO which has been described in this research work has been properly implemented. After implementation, the SEO has been constantly checked for the improvements. Conclusively, it is safe to claim that SEO optimization score has reached up to 71% within 8 days of the implementation. The major components checked and verified through Google Web Master Tool in terms of implementation are based on CRAWL ERROR (DNS error report, Server Connectivity, Robots.txt), SEARCH QUERIES (Number of Queries, Impressions and Clicks) and SITEMAPS (URLs submitted,

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URLs indexed) etc. Furthermore, SEO indexed has been verified through third party website worth and value calculator such as www.domaintuno.com and www.siteprice.org. In the following results have presented.

A. Optimization steps level and traffic 1st report

Table: 01 Optimization Steps Level And Traffic (Intervention One)

Introduction to Audience Analysis			1st
Report of a 1st Day			
Time: 05:28pm		Jan 23, 2015, to Jan 23, 2015	
Country	New Visitors	Returning Visitors	Unique Page Views
United State (5) Pakistan (3)	07	01	00

B. Optimization steps level and raffic 3rd report

This 2nd Intervention Google Analytics Setup and Report after (Adapted from http://www.aliinbox.com)

TABLE: 02 OPTIMIZATION STEPS LEVEL AND TRAFFIC (INTERVENTION TWO)

Introduction to Audience Analysis			2nd
2nd Report Only Of 1 Month			
Time: 10:20 pm		Feb 07, 2015 To March 10, 2015	
Country	New Visitors	Returning Visitors	Unique Page Views
Total Count (101) United State (156) Pakistan (142)	1,128(86.90%)	170(13.10%)	1,815

It is safe to deduce that during 2nd round of audience analysis after the first month of launching nearly two thousand unique page views were observed. Apart from this, result shows 170 returning visitors and 1128 new visitors. This proves the on-page SEO techniques as an effective way of increasing traffic.

V. CONCLUSION

In this research work, a comprehensive advancement of on-page SEO model has been discussed. The Google SEO techniques model has been taken as basic guideline to build up the and enhance on-page SEO techniques. The major short coming of Google SEO model is that, the components of on-page SEO model hasn't been defined well. In this research work, all components of on-page SEO model has been described and defined well and additionally focus has been given on the black hat, white hat and grey hat on-page optimization techniques. Furthermore, based on the theoretical concept and a practical approach has been adopted to implement all on-page optimization techniques in a research project known as www.aliinbox.com. Additionally, the results of implementation of on-page SEO have been presented in the research work. Based on the results, it is safe to conclude that on-page SEO techniques described and adopted in this research study are very effective.

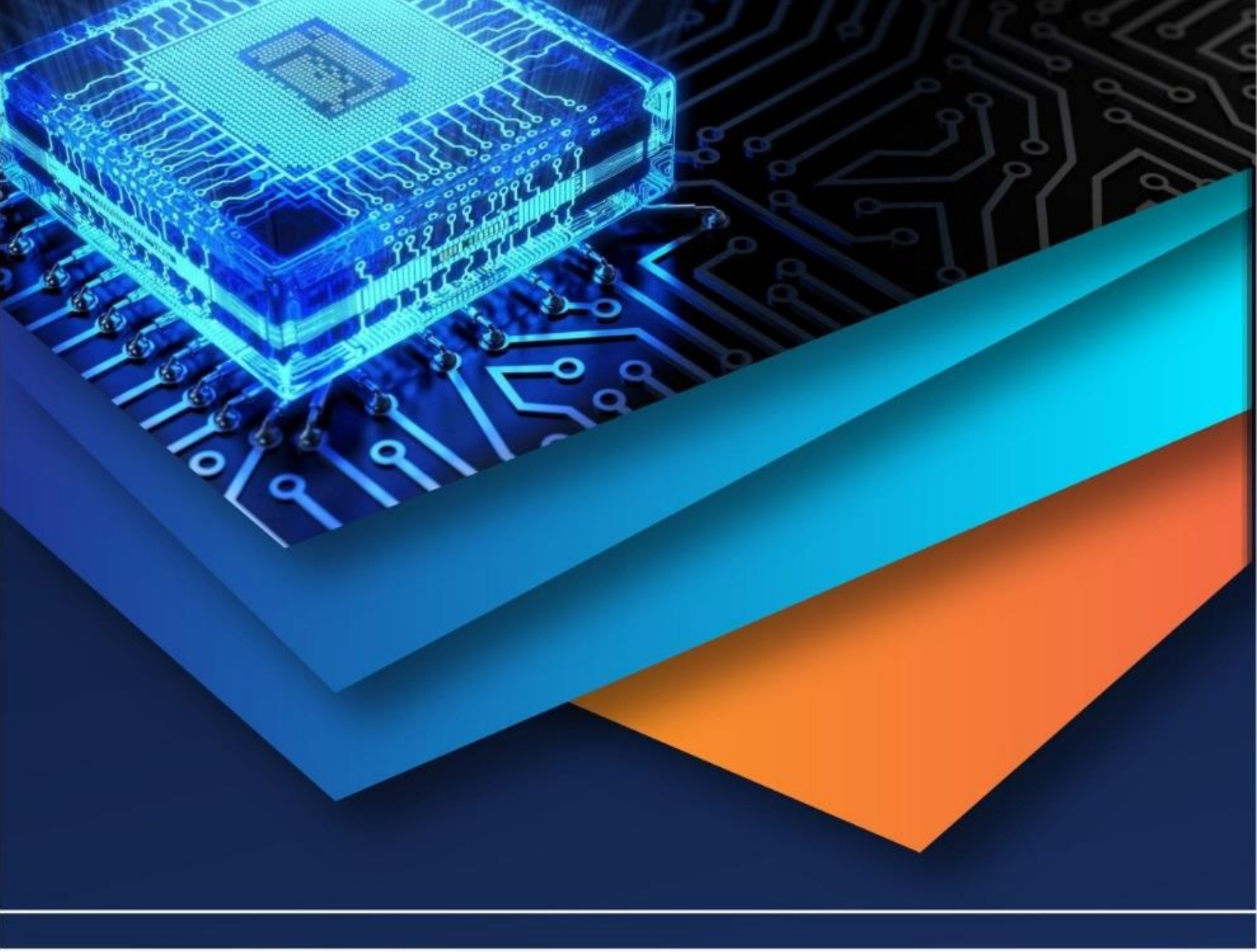
REFERENCES

[1] George S.Spais "Search Engine Optimization (SEO) as a dynamic online promotion technique: the implications of activity theory for promotion managers." 2010, Innovative Marketing.Volume 6, Issue 1.
[2] Alexandru Enaceanu. "SEO Techniques for Business Websites." Romanian-American- University, 2010, Database Systems Journal vol. 1, no. 1/2010
[3] Lalit Kumar, and Naresh Kumar "SEO Techniques for a Website and its Effectiveness in Context of Google Search Engine." Amity Institute of Information Technology, Amity University, Noida, India", International Journal of Computer Sciences and Engineering, 2014, Volume-2, Issue-4 E-ISSN: 2347-2693
[4] Google.com,https://static.googleusercontent.com/media/www.google.com/en//webmasters/docs/search-engine-optimization-starter-guide.pdf, Google, corporation 2010.
[5] Nursel Yalç Na, Utku Köse. ""What Is Search Engine Optimization: Seo." By Elsevier University Ltd, Open Access. Database Systems Journal vol. 1, no. 1/2010
[6] Nursel Yalç Na, Utku Köse. "What Is Search Engine Optimization: Seo." By Elsevier Ltd, Open Access, 2010.

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[7] Gokhan Egria, Coskun Bayrakb. "The Role Of Search Engine Optimization On Keeping The User On The Site." 2014, By Elsevier B.V. This Is An Open Access Article Under The Cc By-Nc-Nd License.
[8] Gokhan Egria, Coskun Bayrakb. "The Role Of Search Engine Optimization On Keeping The User On The Site." By Elsevier B.V. This Is An Open Access Article Under The Cc By-Nc-Nd License.
[9] Ross A. Malaga. "The Value Of Search Engine Optimization." Montclair State University, Usa Igi Global. Copying Or Distributing In Print Or Electronic Forms Without Written Permission Of Igi Global Is Prohibited. 2007.
[10] Patil Swati P. and others, 2012, "Search Engine Optimization: A Study" Received 3rd November 2012, revised 24th December 2012, accepted 27th December , 2012.
[11] Timothy C. Craven, "HTML Tags as Extraction Cues for Web Page Description Construction" Informing Science Journal, Volume 6, 2003. The University of Western Ontario, London, Ontario, Canada, 2003.
[12] Archana and others , "Characterizing Comment Spam in the Blogosphere through Content Analysis " The Department of Computer Science, The University of Memphis, Memphis, 2009, TN 38152- 3240, USA.

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