

## An Analytical Study of the Search Engine Optimization Techniques for Information Retrieval Systems

<sup>1</sup>Prof.Sarika R Patil, JSPM's JTC Tathwade, Patil.sarika417@gmail.com

<sup>2</sup>Dr. Sarika Sharma, Director JSPM EIOCA, Wagholi, sarika4@gmail.com

**ABSTRACT:** Search engine is the most prominent tool to extract information from web (www).It is a very large distributed digital information .The concept of information retrieval systems is to only receive the input from user as keywords, process it then compared with the database and the information is provided to the user. search engine optimization is the technique which is used to increase the importance of the pages which are most frequently visited which the user come upon regularly. This article introduces and discusses the concept of search engine optimization, features of web search engine and overview of elements and tools used in search engine optimization. In search engine optimization there are mainly two basic algorithms used page rank and Hypertext Induced Topic Search(HITS). In page rank algorithm, links connected to various web pages and websites are given more importance and weightage while in the HITS algorithm query based search is performed.

**Keywords:** Search engine optimization (Seo,) Information Retrieval Systems, links, WebCrawler.

### 1. INTRODUCTION

Information Retrieval System is the process of improving the visibility of a website or web page. The general objective of an Information Retrieval System is to minimize the overhead of a user locating needed information.(e.g. query generation, query execution). World wide web provides us with huge amount of necessary data digitally available as hypertext data may be web pages, images, information and other type. Search engine is internet based tool that searches an index of documents for a particular term, phrase or text specified by user. Search engine optimization can be referred to as addition and modification of all variables and extended variables of a website to achieve a better position in the search engines. The variables implies to META tags and content. And the extended variables implies to links from other sites. This optimization is done in stages. Search engine optimization is not simple. It is more about strategy, method and structure.

### 2. RELATED WORKS

Generally people visit a website to find out information according to their need, but if they did not find right content they immediately click away from site so in order to draw their attention and bring them back maximum number of times. It fulfills user need as well as improves rank position in search engine. It is the process of improving the number and quality of traffic

to a web site from search engines via natural listing for targeted keywords. It refers to the process of “optimizing” both the on-page and off-page ranking factors in order to achieve high search engine rankings for targeted search terms. Cloud to have all information and on the basis of that information the decisions are to be made. So the provenance information leads to the correct decision made by the user.

Search engine optimization is also used for getting higher rank in search results from the business information. Corporate sectors and institutions want to become more recognized worldwide through seeing higher ranks for their websites. It is an approach for the retrieval of web pages related to user requests on the internet. Actual objective is to make more preferable website in search result and make more visitors for higher ranks.

Examples for popular search engines

- [6] Hema Dubey, Prof.B.N.Roy, "An Improved Page Rank Algorithm based on Optimized Normalization Technique", IJCSIT, Vol. 2(5), 2011, 2183-2188.
- [7] Nidhi Grover, Ritika Wason, "Comparative Analysis Of Pagerank And HITS Algorithm", IJERT, Vol. 1 Issue 8, October 2012.
- [8] Saeko Nomura, Satoshi Oyama, Toru Ishida, Tetsuo Hayamizu, "Analysis and Improvement of HITS Algorithm for Detecting Web Communities", Systems and Computers in Japan, Vol. 35 Issue 13, November 2004, 32-42.
- [9] Vikram Pudi, Kumar Shubhankar, Aditya Pratap Singh, "An Efficient Algorithm for Ranking Research Papers based on Citation Network
- [10] Knezeric B. Vidas-Bubanja M., Search Engine Marketing As Key Factor For Generating Quality Online Visitors,
- [11] Raorane A.A. and Kulkarni R.V., Association Rule –
- [12] Extracting Knowledge Using Market Basket Analysis Research Journal of Recent Sciences, 1(2), 19-27 (2012)
- [13] Bharat K. and Mihaila G.A., Hilltop: A Search Engine: Based on Expert Documents, Technical Report, University of Toronto (1999)
- [14] Evolving Search Engine Spamming Techniques Proc. of International Conference on Network and Computer Science, 6, 214-217 (2011)
- [15] Zhu V., Wu G. and Yunfeng M., Research and Analysis of Search Engine Optimization Factors Based on Reverse Engineering, Proc.3rd International Conference on Multimedia Information Networking and Security, 225-228 (2011)
- [16] Yunfeng M., A Study on Tactics for Corporate Website Development Aiming at Search Engine Optimization,
- [17] Shi J., Cao Y. and Zhao X., Research on SEO Strategies of University Journal Websites, Proc. 2nd International Conference on ICISE, 3060-3063, (2010)
- [18] Gyongyi Z. and Garcia-Molina H., Web Spam Taxonomy, Proc. 1st International Workshop on Adversarial Information Retrieval on the Web, 12, (2005)
- [1] Wang F., Li Y. and Zhang Y., "An Empirical study on the Search Engine Optimization Technique and Its Outcomes" Proc. 2nd International Conference on AIMSEC, 2767-2770 (2011)
- [2] Second International Workshop on Education Technology and Computer Science, 3, 673-675 (2010)
- [3] Somani A. and Suman U., Counter Measures against
- [4] Kent P., Search Engine Optimization for Dummies, Wiley Publishing, 2, 67-68 (2003)
- [5] Kumar R. and Saini S., A Study on SEO Monitoring System Based on Corporate Website Development, International Journal of Comp. Sci., Engg. and Infor. Tech., 1(2), (2011)
- [6] Advanced search engine optimization logical approach lulu2

#### **AUTHORS**



She is currently working as Assistant Professor as JSPM College Pune. She has done MCA, M.Phil and pursuing PhD from Pune University. Her research area includes web technology, optimization techniques, information retrieval systems.



**Dr. Sarika Sharma**, MCA, Ph.D, is Director at JSPM's Eniac Institute of Computer Application, Pune, India. She is Author of five books on CRM, Project Risk Management, and Information Technology Management. She has more than 30 research publications to her credit in International and National journals and presented her research work in conferences. She is also member of professional bodies like CSI,ACM.