DESIGN AND IMPLEMENTATION WEB CONTENT AND SERVICES IN OPEN SOURCE CONTENT INCULCATE MANAGEMENT SYSTEMS FOR UNIVERSITY WEB RANKING

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Introduction

During the past few decades, information and cognizance sharing has become one of the paramount corporate responsibilities of institutes all over the world. The World Wide Web (WWW), is an information space, was initiated with the intention of bringing the sources of information into utilizing contemporary available technologies. Consequently, WWW, or simply the Web, has become one of the main sources of information on academic and research activities. So, the degree of quality and availability of the shared information by different universities have become a consequential concern. Because of that, Cybernetics Lab, which is governed by the National Research Council of Spain, introduced a reliable and multidimensional methodology to quantitate the degree of presence, impact, openness and excellence of the university websites all over the world.

The methodology utilized for evaluating the scientific journals by Thomson ISI; anteriorly kenned as the Institute for Scientific Information (ISI), was reproduced to quantify the attractiveness of websites. This incipient approach of studying information resources, structures and technologies on the Web included webometrics. While there were several studies on webometrics, Web Impact Factor (WIF) was introduced to analyse the linkage between websites The WIF is the link density of a given website. That is, the ratio between the total number of links to a website and the number of pages of the website indexed by a search engine (publicly accessible pages) in a given time. The total number of links of a website consists of backlinks (in links): hyperlinks on some other websites

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that are directing visitors to a website, self-links: navigational links used to direct visitors from one page to the other within the website, and external links (outlines): hyperlinks sanctioned the site visitors to access the other websites.

Architecture

Content management systems typically are predicated on databases that accommodate to hold the information exhibited on the page and configure the portal, and for scripting languages or special software on the server side. Because on a wide range of hosting providers servers and hence the competitive costs the most mundane tandem is MySQL (My Structured Query Language) database and PHP (PHP: Hypertext Preprocessor) scripting language.

Content is disunited from the page template and stored in the database data. Application running on the server retrieves the stored data and exhibits them in predefined locations on the site. Template is prevalent for the entire site graphics, information about how to format the content and its layout on the website. For the definition of the presence of text, photos and other items comprising the main content of the site called cascading style sheets (CSS) are most frequently utilized. Disseverment of content from form sanctions for consummate control of the portal appearance. Any content management system consists of the presentation part intended for visitors to the portal and the administrative part of enabling the integration of and modify the content of this site after logging into the application by sanctioned utilizer. CMS systems conventionally sanction for diversification power of editing which sanctions users to ascertain more preponderant security and evade errors resulting from the inexperience of some users. Web admin panel is available through a web browser, so changes can be made easy to access from each location with Internet access.

Methodology

This paper data Accumulation the official websites of ten Sri Lankan state universities were culled for this study. All the culled websites have .ac.lk as their first and second-level domains that have ascertained the minimization of the effect of top-level domains for the study. Mainly two webometric implements, Developer Shed: An online open site explorer accommodation and commercial search engines (Google) were employed for data accumulation. Where the ranking has done by connectivity based criteria. Albeit Cybernetics research group has defined several rankings such as presence, impact, openness and excellence, this study fixates on the impact ranking of the culled websites. It has been a proven fact that search engines have not indexed all the web pages of a website; instead, they return estimated figures given by the search engine algorithms.

Webometrics ranks of srilankan state universities in the Local context 2017 – Table 1

Sri Lanka

ranking	World Rank	University	Det.	Presence Rank	Impact Rank	Openness Rank	Excellence Rank
1	2116	University of Peradeniya		799	6136	1459	1792
2	2263	University of Colombo		710	4755	1782	2319
3	2616	University of Kelaniya		766	6823	1624	2854
4	2870	University of Moratuwa		959	4305	2530	3415
5	2883	University of Ruhuna		3656	6792	949	2637
6	3365	University of Sri Jayewardenepura		481	7285	2255	3625
7	4534	University of Jaffna		1793	11066	2980	4166
8	4536	Rajarata University		2768	13617	3683	3532
9	4885	General Sir John Kotelawala Defence University		2626	3736	4895	5789
10	5329	Eastern University of Sri Lanka		1707	12873	4575	4285
11	5441	Open University of Sri Lanka		973	9655	2003	5254
12	6020	Sabaragamuwa University		9013	13294	4997	4403
13	7343	Wayamba University of Sri Lanka		2646	10236	4404	5789
14	7754	Sri Lanka Institute of Information Technology		5633	10935	4135	5789
15	9600	South Eastern University of Sri Lanka		1782	13379	5427	5789
16	9967	Industrial Technology Institute		10500	16711	4026	5254
17	11249	Uva Wellassa University		5889	16046	4156	5789
18	11900	ANC Education		22299	8910	9491	5789
19	13096	University of the Visual & Performing Arts		5125	13070	9241	5789
20	14331	Postgraduate Institute of Agriculture		6850	16350	8368	5789

The question arises whether to utilize yare-made systems, or invite your own. Both approaches have their advantages and disadvantages. On the one

hand, yare to utilize systems reduces the time to prepare the websites, through the utilization of yare-made modules. Troubleshooting is made more facile because of the technical support and online community. Indicting your own application is time consuming, but sanctions for full flexibility in decision making. We can make decisions as the content stored in the system will be presented on the Web and how content will be handled as dynamic. Preparing your own content management system conspicuously requires a lot of work-cognate the development of felicitous safeguards, can implement the required functionality and maintenance of the system. But gives a possibility of full liberation in transmuting and upgrading components.

Findings

Web impact factor measures the average impact per page of a website regardless of the link type. Generally, self-links reflect the logical structure of a website and how the pages are organized in webservers. Ergo, self-links become less paramount over backlinks since self-links are conventionally used to navigate through the website itself rather than enrichment of information of it. According to the recent studies, the omission of self-links from WIF calculation was recommended by several researchers. Then the incipient formulation to calculate the link density (without self-link) of a website has been defined as Revised Web Impact Factor.

Discussion

It has been encountered that the degree of in formativeness plays a paramount preface for in links that are emanating from other websites. If a university website contains affluent information, which can be referred from other websites, it is conspicuous that the other institutional websites incline to have a reference (link) to the subjective website. In order to understand whether there is a relationship between each rank and Webometrics Impact Factor ranks. Variety of additional and open-source

Frameworks can make development process mush quicker and easier for much effective delivered to entire university webometrics ranks.

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