SMARTCRAWLER: A TWO-STAGE CRAWLER FOR EFFICIENT SEARCH RESULT

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Abstract - *As web grows at a very fast pace, there has been increased interest in techniques that help efficiently locate interfaces. The dynamic nature of web and the large volume of web resources, achieving high efficiency and wide coverage is challenging issue.We are having a two stage framework names are Smart Crawler for efficient harvesting web interfaces. The First stage of Smart Crawler, Smart Crawler performs site-based searching for middle pages with the help of search engines, for the avoiding visiting large numbers of pages.*

For getting more accurate results for a focused crawl, Smart Crawler give the rank to websites on high priority of relevant topic. In the second stage, Smart Crawler achieves fast in-site searching by uncovering most relevant links with an adaptive Link Ranking. To eliminate bias on visiting ,some highly relevant links in web directories. Design a link tree data structure to achieve wider coverage for a website.

The Experimental results on a set of representative domains will show the agility and accuracy of our proposed crawler framework, which efficiently Retrieves web interfaces from large-scale sites and achieves higher harvest rates than other crawlers.

1.INTRODUCTION

We proposes a system for efficiently harvesting web, hence we have developed a SmartCrawler for efficient web interface.

It is challenging to get relevant result during search, to address this problem previous work has proposed two type of crawler Generic Crawler and Focused Crawler.

Generic Crawler fetches all searchable forms and not focus on specific topic.

Focused Crawler search on specific topics which get relevant result.

In First stage SmartCrawler do site based Searching for seed sites with the help of search engine and become efficient and save time by avoiding visiting large number of pages.

To reach better result for focused crawler, a Crawler ranks priority to web-sites on the basis of topic and outside links on the page. To get better result for focused crawler, smart crawler ranks webpages on the basis of data on the page and outside links from the webpage.

This is done in the second stage of Smart Crawler and hence it achieves fast in site searching. This helps us to make a crawler which is better than the existing crawler and more efficient.

We propose a two-stage framework, namely SmartCrawler, for efficient harvesting web interfaces. SmartCrawler performs site-based searching for center pages and avoiding visiting a large number of pages and it requires less time for searching. Using the contents of the root page of sites, achieving more accurate results SmartCrawler achieves fast in-site searching by most relevant links with adaptive link-ranking.

1.1 PREVIOUS WORK

The selection of correct source in existing directories, Focused Crawler is developed to visit Hyperlink, Hypertext . The page classifier use to classify pages as topic relevant or not it gives the priority to links in topic. Smart Crawler is base on domain specific crawler locating relevant information the design of crawler not only classifies site in 1St stage it filter the information relevant or irrelevant site and also categorized Forms in 2nd stage.Smart Crawler 1st ranks sites and then give priority withen site to the another ranker .

2. PROPOSED WORK

In this work, our system perform Efficient searching by using two stage crawling approach, we are taking seed sites from google result.

The two stages of crawler are : Site Learning and In-Site Exploring.

First stage starts by taking seed sites from Google, start searching the relevant data and links from each site. When the count of unvisited web pages get less than the threshold (8), it performs reverse searching.

Link Frontier takes site result and search all links on the webpage with the help of Page Fetcher. Then Candidate Frontier checks all the keywords present on the page. Link Ranker ranks the website on the basis of keywords and number of outside links, and the result obtained is saved in the database.

The process continues until unvisited sites are there to be visited. The data got from the search are stored in four tables category, category_rank, ranks and urls. In category table we categorize it into category_id and category we give category_id to each category category rank in category rank table we differentiate category by category_id for efficiency of models. In Crawler Ranks in the ranks table urlid, outside links, category are consist. We are ranking according to number of keywords, outside links present on page Urls table: consist of urlid, urls name and whether the site is visited by crawler or not if not return 0 else written 1.

2.1 ALGORITHM

Step 1 : Collecting seed sites related to keyword from Google.

Step 2: Visiting seed sites & Collecting all links present on that page.

Step 3 : Visit each and every link and collect all keywords.

Step 4 : Outside links on pages are also calculated.

Step 5 : Calculate page rank of each and every link based on keywords , number of links.

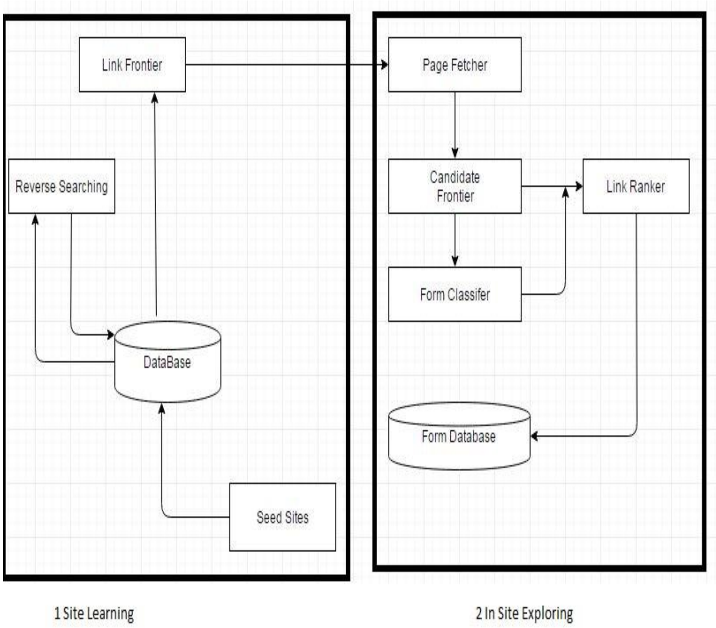
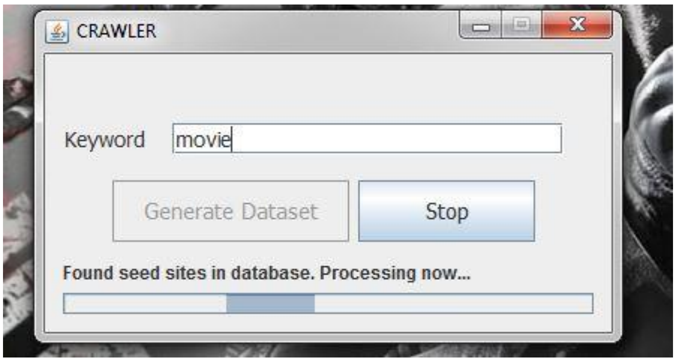


Fig -1: Architecture Two Stage Crawler

3. RESULT

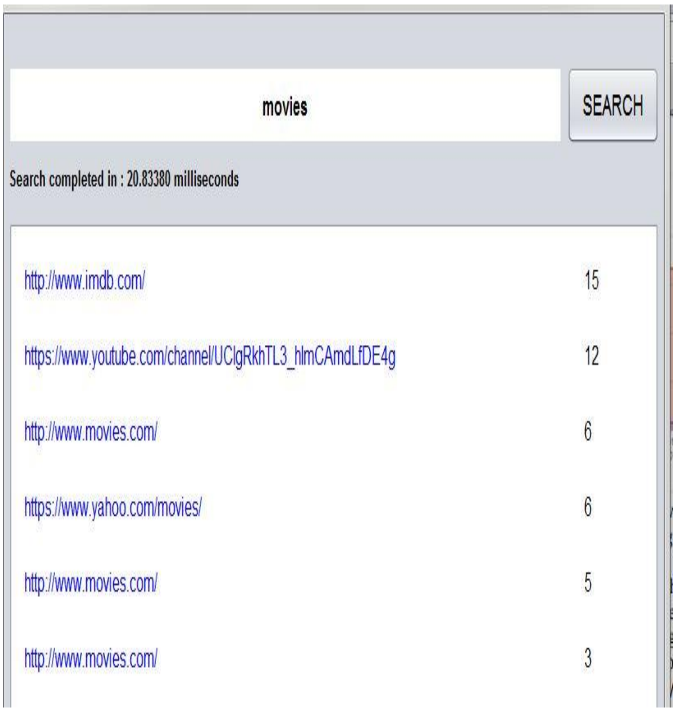


Keyword: movie

Found seed sites in database. Processing now...

Fig : Crawler

The Crawler having two button generate dataset and stop. When we enter the keyword in crawler and click on generate date set it start generating data.



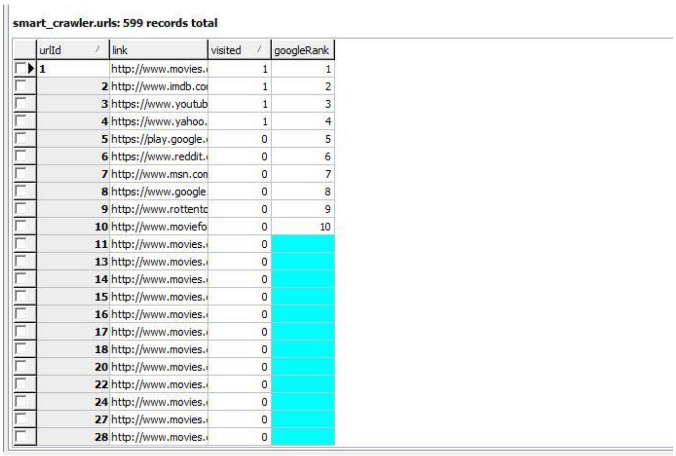
movies

Search completed in : 20.83380 milliseconds

http://www.imdb.com/	15
https://www.youtube.com/channel/UClgRkhTL3_hlmCAmdLfDE4g	12
http://www.movies.com/	6
https://www.yahoo.com/movies/	6
http://www.movies.com/	5
http://www.movies.com/	3

Fig 2 : *Search Result*

After the successful generation of database by Using Crawler, the Search Engine of Smart crawler start searching keyword from database and show relevant result. With showing time the result get in nano second but for the understanding we converted into millisecond.



smart_crawler.urls: 599 records total

urlId	link	visited	googleRank
1	http://www.movies.	1	1
2	http://www.imdb.co	1	2
3	https://www.youtub	1	3
4	https://www.yahoo.	1	4
5	https://play.google.	0	5
6	https://www.reddit.	0	6
7	http://www.msn.con	0	7
8	https://www.google	0	8
9	http://www.rottentc	0	9
10	http://www.moviefo	0	10
11	http://www.movies.	0	
13	http://www.movies.	0	
14	http://www.movies.	0	
15	http://www.movies.	0	
16	http://www.movies.	0	
17	http://www.movies.	0	
18	http://www.movies.	0	
20	http://www.movies.	0	
22	http://www.movies.	0	
24	http://www.movies.	0	
27	http://www.movies.	0	
28	http://www.movies.	0	

Fig 2 : *Datebase that Store data*

The Database contain urls,url_id ,category,ranks visited site the site are visited return 1 else 0.Outside links are visited by crawler.

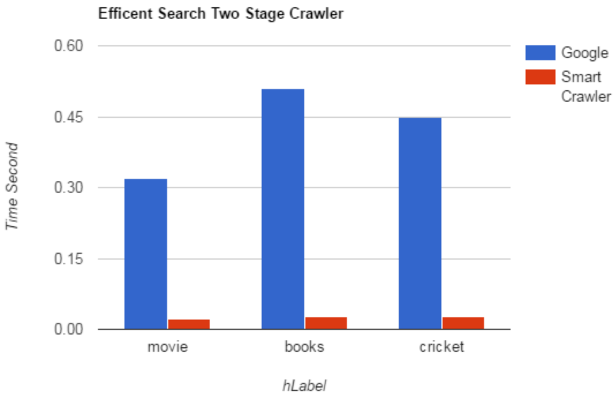


Fig 2 : *Figure Showing Search Time Google and Smart-Crawler*

The Graph shown in the figure gives the analysis of the search result with different keywords. By watching the graph we can know the change in result efficiency.We can also know the efficiency of crawler.

4. CONCLUSIONS

We proposed an effective harvesting framework for web interfaces, namely SmartCrawler. We show that our approach achieves both wide coverage for web interfaces and maintains highly efficient crawling.

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