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Search Engine for Healthcare Solutions

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Abstract- Technology has infiltrated every aspect of life in today's society, but it is heartbreaking to learn that millions of people die each year as a result of a lack of understanding about accessible medical treatments, rather than a lack of medical facilities. The right to good health is highly prized. India has the world's most uneven healthcare system. On the one hand, our country is rapidly developing as a medical tourism destination, with people travelling from all over the world to receive high- quality medical care. Locals, on the other hand, appear to be unable to access the majority of these advantages. The people's dire financial status is the reason behind this. Many government initiatives and non-governmental organizations (NGOs) assist such persons, yet public awareness remains a difficulty. A search system is one approach to make this search easier. A probe system is one of the methods for forming this search. A search system is a piece of software that searches the Internet for information. The project's purpose is to develop a search system that can be used to conduct searches across a variety of medical fields, including disease- specific information, hospitals, and non- governmental organizations that provide therapy. The search system includes components such as a web crawler, an indexer, and a ranker. The amount of content available on the internet is constantly increasing, and search engines are used to locate it. Additionally, it is becoming a focal subject for academic inquiry. Any processing of web pages requires the use of computer programme. Web crawlers are used by various web search engines and specialized search tools to collect massive collections of pages for indexing and analysis.

Keywords- Financial status, search engines and specialized search tools, etc

I. INTRODUCTION

In today's society, everything is getting more processed and internet-based. Several companies have already turned their focus to automated technology that has made people's lives easier and more efficient. One of the most significant features of every country is its health-care business.

The Health Care System is defined as a collection of individuals, institutions, and resources that provide health-related services to the general population or anyone with medical requirements. Health care is extremely important in society, and it has changed over time to provide a variety of cost-effective and streamlined procedures. Asian countries have made great progress in the health-care system, and the Bangladesh government's ICT division is now working on a number of health-care-related initiatives to digitalize this sector.

The major purpose of this article is to develop an internet- based application that will allow users to keep track of their medical knowledge and access it at any time and from any location. An online health care (OHC) system uses laptops, mobile phones, the internet, and other technology to create services electronically to fulfill patients' medical needs. In

order to store their medical knowledge, users will register as patients in our online Health Care system. The system also includes registered doctors working in non-commissioned facilities. The World Health Organization will offer medical equipment and bring down required pharmaceuticals to patients who want it. There is also a mobile application for Associate in nursing automation that is linked to the Health Care system web application.

A web search engine is commonly referred to as a "search engine." A programme that searches the internet for information is known as an online search engine.

The results of a search are frequently displayed in a list and are referred as hats. Web pages, photos, details, and other file kinds may be included in the details. Other search engines mine data as well, looking for information or open references. Search engines, unlike Web Guides, which are updated by human editors, run according to an algorithm or are a blend of algorithmic and personal input.

II. LITERATURE REVIEW

The authors in [11] have discussed that the project is developed with the help of several proven theories given by researchers all over the world. Several research papers led to the literature study and comparison of various algorithms of crawling and ranking used in this project and also helped in understanding the basic working and functionalities of the existing systems.

III. HEALTH SEARCH ENGINES

Med Worm is a medical RSS feed that also functions as a search engine based on data gathered from RSS feeds. RSS stands for "very simple syndication," and it's a technique that's used to simply post and acquire information on the internet (http://www.medworm.com).

Pub Med might be a knowledge-based medical text search engine. WebMD might be a useful one-stop shop for medical information. WebMD also has a lot of interesting interactive calculators, quizzes, and other fun activities that can help you understand medical information a little better. Relemed is a new programme from the University of Virginia's School of Medicine that searches Pub Med medical literature by distribution linkage rather than just looking for keywords.

Daily Master of Education delivers high-quality information about commercially available medications. This computer provides health information providers and, as a result, the general public with a consistent, complete, up-to-date look-up and transfer resource of pharmaceutical content and labeling as found in medication package inserts.

A medical man is a general programme, associate degree innovative and progressive search application that allows anyone to quickly type in a medical term and receive an in-depth, formatted report on their disease, condition, or medication in a matter of seconds (http://www. chennaionline.com/hippocratesweh).

For miss pelt terms, Med Hunt suggests alternative spellings in a variety of languages. (http://www. hon.ch/Med Hunt/) Searches human-reviewed and laptop-indexed Web Pages. Medical Word Search Med Ind gives people inside and beyond India online access to full-text Indian medicine magazines.

Ind MED is a database of excellent peer-reviewed Indian medical journals. Its information meant to give medical professionals, researchers, students, and medical library professionals quick and easy access to Indian literature. Open Med: OpenMED@NIC is a medical and allied sciences associate degree open access archive.

Authors and house owners can self-archive their scientific and technological publications here. The community could be a collection of gateways that provide medical practitioners with access to network resources in the health and life sciences.

IV. PROBLEM FORMULATION

Scenarios related to health have always been a major issue of concern in India since the years before the independence. A majority of the population has been affected since then due to malnutrition or denial of access to health care facilities. But as the years passed by, researchers developed new technologies which led to significant advancement in science and medicine.

In the current scenario, India is becoming a hub of advanced healthcare facilities with prominent medical institutions and hospitals. NGOs have been an active part of the medical field and government policies have also been in the favor of good health. But, even today we encounter a large number of deaths due to critical diseases like Cancer, Hepatitis, AIDS, Jaundice, and many more.

The major reason behind this is that people are not aware of their nearest healthcare facilities. In this project, the main focus is on the development of such a system that provides all- around information to the users related to their queries.

V. OBJECTIVE

1. To design and implement a web crawler:
The crawler crawls the web pages related to the queried disease as well as the hospitals and NGOs working for the same.

2. To design and implement an indexer:
The indexer indexes all the fetched relevant data (keywords) from the web pages. Inverted Indexing is used to index the keywords.

3. To design and implement a ranker:
The ranker adds a rank to the indexed pages so that the most relevant results appear on the top of the search results.

4. To design and implement auto-complete module:
The auto-complete module helps the user to type a word quickly by providing a suggestion of similar words.

5. To provide the map service to hospitals and NGOs:
This service provides maps to reach the nearest hospitals and NGOs. The users can enter the city and the nearest hospitals and NGOs are provided as a result and they can be pinned on the map.

6. To design a front-end application for the user to interact with the system:
The front end contains a search bar and a search button in which the query is entered by the user. The results related to disease, hospitals, and NGOs are viewed in separate tabs respectively.

7. To integrate all the above modules:
The final objective is to integrate all the above modules and implement a searching system.

VI. EXISTING SYSTEM

There are several online portals and websites helping people these days to find doctors, hospitals, and blood banks in their city and nearby localities. Few examples of these are doctorbabu.com, medindia.net, etc. They even help the common people calculate diabetes risk assessment, blood sugar conversion online, help them find medical colleges, resources, specialty services, directories, various articles, and drugs for specific diseases and pain.

Med Search could be a specialized medical net program, to handle these challenges. Existing net search engines usually cannot handle medical search well as a result of they are doing not think about their special needs.

Usually, a medical info searcher is unsure regarding his actual queries and unacquainted with the medical word. As a result, he prefers to initiate lengthy questions in which he describes his symptoms and situation in straightforward English and receives detailed, relevant information from search results. Med Search employs a number of fundamental strategies to improve its usability and, as a result, the quality of its search results.

First, it accepts large questions and reformulates them into shorter queries by extracting a set of key and representative terms. This not only speeds up the question-answering process, but it also increases the quality of the search results. Second, it offers a wide range of search results. Finally, it suggests related medical phrases to help the user quickly digest search results and narrow down their query. We looked at how Med Search handled medical queries that were posted on medical message boards. The results suggest that Med Search will be able to handle a wide range of medical queries efficiently and effectively.

Bing Health As part of Microsoft's Bing programme, (formerly Live Search Health) could be a health-related search service. It's a search engine that specializes on health-related information from a variety of trustworthy and respectable sources, including Med story, mayonnaise Clinic, and the

National Institutes of Health's MEDLINE database and the search results are displayed in Live Search Health information was presented in a three-column format, with health-related articles from reputable sources on the left, internet search results in the middle, and sponsored results on the right.

Each health search query and response was encrypted as an explicit component of Live Search Health, resulting in a live of privacy and security managing medical problems.

VII. PROPOSED SYSTEM

This project is about a platform that consolidates all the information about the disease, its symptoms, the concerned hospitals and NGOs providing treatment for the same. There is an additional feature of the map, which helps users pin the address of hospitals and NGOs on it to mark the area where they are situated and verify if it exists or not.

VIII. OVERVIEW OF THE PROJECT

The project is a search system that is dedicated to the medical field. It has a friendly Google-like interface, and helps to solve user's queries related to health problems.

The results are separated into three different categories- Informative, Hospitals, and NGO's with easy navigation between each one of them. The project also supports the Map service, which helps users to find the nearest Hospitals and NGO's working for the cause.

IX. RESULT

- The web crawler is fully implemented and crawls almost ten pages per minute.
- The indexer is completely designed and implemented and works hand in hand with the crawler.
- The ranker is fully implemented with the help of the HITS algorithm, which ranks the pages, crawled for better-ranked results.
- The auto-complete module and the map module are completely implemented.
- The front end is designed and implemented along with the integration of all the other modules of the project.

X. CONCLUSION

People are hungry for medical information. Existing internet search engines are typically unable to handle medical searches well because they do not consider their unique requirements. Typically, a medical data searcher is unsure of his own inquiries and new terminology. As a result, he prefers to write extensive queries in which he describes his symptoms and scenario in simple English, and then receive full, orthogonal facts as a result of the search.

To overcome these obstacles, the idea proposes dedicated internet computer software for retrieving medical data. It will make normal web users' lives easier throughout the entire medical treatment process. The design of this technique considers the unique requirements of medical search. It accepts queries submitted in plain English, returns relevant search results, and suggests nearby hospitals and NGOs on maps with accurate ranking and annotation. These options square measure enticing to standard web users United Nations agency have very little medical information and square measure unfamiliar medical language.

Consumer-centric medical search is that the main aim of this project. This method is employed to look at the queries associated with the medical field and supply relevant leads to 3 tabs specifically, Homes, Hospitals, and NGOs. It conjointly provides maps service through that user will opt for his treatment and town reminiscent of that the results of hospital's address and Ngo's address square measure displayed during a tab. The address is often stapled on the map to verify their existence. The system provides a more robust read of all the consolidated information that a user needs for medical treatment.

REFERENCES

[1] Skiena, S.S. (2008). Introduction to Algorithm Design. In The Algorithm Design Manual (pp. 3-30). Springer London.

[2] Coppin, B. (2004). Artificial intelligence illuminated. Jones & Bartlett Learning.

[3] Yoo, A., Chow, E., Henderson, K., McLendon, W., Hendrickson, B., & Catalyurek, U. (2005, November). A scalable distributed parallel breadth-first search algorithm on BlueGene/ L. In

International Journal of Science, Engineering and Technology

An Open Access Journal

Super computing, 2005. Proceedings of the ACM/IEEE SC 2005 Conference (pp. 25-25). IEEE.

[4] Shen, A. (2011). Algorithms and programming: problems and solutions. Springer Science & Business Media.

[5] Deo, N. (2004). Graph theory with applications to engineering and computer science. PHI Learning Pvt. Ltd.