Personalized Search for Small Screen Devices

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ABSTRACT

Nowadays the technology has advanced so much that the smart phones are becoming more powerful and useful. The smart phones include various applications that allow us to carry out the tasks easily. We do personalized search for data for the small screen devices. An android application for smart phones is being developed where it allows the user to search information of their interest. Once the data is obtained it will be displayed back on the screens of the smart phone application clearly. The focus in our work is to send the user request from application to the local server. Once the request is received the server needs to collect all the necessary data about the user or the smart phone sending the request. Later on we perform web crawling to collect the data for user request. After data is obtained from web it is stored on to the server. Then the response is sent back from server to smart phones. The response data is now rearranged on the screens of phones based on the various available resources.

Keyword: *Personalized, Android Application, Smart Phones, Small Screen Devices, Server, Web Crawling.*

1. INTRODUCTION

In a short time ago mortality has verified an innovation in the industry of cell phones and originates growth on the regime of various mobile applications that are used from enlightenment, academic information to normal gaming apps, and robustness in health care and so on. The android staging is most commonly used operating system on most of the mobile phones, so there is increase in manufacture of hardware machineries. The intent is to acquaint the stage for android and propose an application to gather the data of user interest by deploying on correct operating system.

As the trend for mobile phones is increasing the surrounding environment is constricted. The usage of the mobile phones is also rising so the potential is also emerging rapidly. Earlier only the basic handsets were used for making calls but now the technology has improved so that they provide high potential of service for the people in society. The central location in which data is stored and managed that has wide ranging and bountiful information in the cyber space. The large number of data from cyberspace has given difficulties for gigantic study. Since there is large amount of data handling them or finding the proper data or information is very problematic. So we need to make use of content management tools for finding out the appropriate data. The data may be that the set of user using one management tool and the data is collected by other using one or more tool.

In today's span of life the internet is the most commonly used in the cell phones. There are few problems that arise in cell phones like all the required data for users is not displayed on the screens of devices since they are small to fit all data. The programmed routine is used for understanding and fetching the information from internet, also can fetch information from cyber web without any help from peoples. Different mining technologies are used to collect the data. The data collected from internet is of different kinds and are called as data feeds. The browser in the mobile phones should bewell ordered and systematic so that it can give out the correct data for the request submitted by user.

Different personalization methods are used to represent the user requests. The user request personalization is done as based on location and content ontology. The user query is handled by onto-search client based on the user preference. The search results are collected using onto search server. The data for users is provided security by onto search client. The client is of android platform and the server is pc.

We build an android system is build that provides all the required information on one screen. The application

shows all the collected and related to information on one screen along with proper user interface. The mobile application is developed are being deployed on android platforms.

The main intent in this paper is to build a system for small screen devices and allow users to send the request to server. The request is sent from user to server to collect data of their interest. When the server receives the request it must be able to collect the information about users who sent the data. The server carries out web crawling to collect the data for the request sent by the user. Server has to extract only the data that is required by user and store it. Then the server needs to send back the response to the system. After the response is received by the system it rearranges the data using the available resources and displays the data to user with the proper orientation.

2. LITERATURE SURVEY

To fetch the data from different sources it should be programmatically join data of all sources. Different methods are used to extract data from various sources:

D. Veeraiah et.al, describes Based on certain specified format we need to fetch the data from web by using proper process program. This approach is less adaptable and larger exhausting. Another method to extract data is by using wrapper induction. In this induction method there is a set of data segments there is numbered as per their interest. There is set of restriction deployed to extract the user information. There is also an automatic method used to extract the user needed data. It mainly concentrates on reducing own effort and improvise the adaptability. Here there is need to identify the required data set and extract required data. [1]

Divya et.al, says that the search browser gives the results which are admissible or unrelated for the user requests. Many users may also require the different data for the same requests made. The browser personalizes the data search based on the click by users. The search sometime uses the ontological profile of user and describes a method to search data when browsing through internet. Some methods here use ontology to browse while certain other uses to make clusters of web search data.[2]There is a systematic mobile ontology which mainly works for mobile search rather web search. To know the response of user in data search a rank net method has been implemented. First the personalization methods were only concerned with the conduct of user without even knowing which the other data present around search. The main problem is that it will not look into the powerfulness of user data. [2]

Xing Xie et.al, described that Google provided different services for users. This allows displaying data and summarizing the results of every data and displaying it. The user has to go through the entire data to collect the data that they require. The summarized results tell users which path they need to follow to collect data. The way to search data by users is done by WAP and so on. The efficiency to obtain data is reduced because of small screen size. To go to correct information preprocessing has to be done. The thumbnails were used to collect the query data. The processing allowed making quick and correct decision. The problem of providing the input from keyboard was solved. The cited data on web pages improved the search. Page adaptation is of two types like change the old web pages or use new mechanism to allow them to show in variety of sizes. The main concentration should be done to present all data into one page since there is no proper way to remove the unwanted web page data. Hence no proper spend more time in searching data. There are two different techniques used to access web page data, one is by identifying difficult data patterns and the other is to detect the correct data patterns. [3]

Yannick et.al, says that designing the performance of user is great risk or problem. User profiling and drift is used for tenure prediction.

Concept Drift

It is the change in performance and fondness along with the change in time. The drift is of two types real and virtual. When the distribution of destination value changes it causes real drift to occur. The change in distribution of input values causes virtual drift to occur. In machine learning the profiles of users are all predefined. The drift method must be able to adjust to changes in system to distinguish between robust and noise. The blind and informed method is used to handle drifts. Blind method accepts system without knowing the changes made to the system. Informed method is known about changes made and tries to update system. [4]

Weng Wen et.al, describes that, to understand the surrounding environment to carry out communication

between user and application we should have proper and correct data. We consider the context data for interaction. The different kinds of context data like user context, time context, and physical context is used. User context always contains all the data related to users like their own personal data, body temperature and so on. Physical data has information about surrounding environment, temperature, etc… Time it stores time data of every seconds. The location of all cell phones is identified using mobile network and location system. The hardware devices that receives and responds to data is called context awareness. [5]

Recommendation System

There is vast amount of data that is being collected by smart phones every now and then so this data can be used by user as they require. To understand the requirements of the user and to take appropriate actions we use personalized recommendation system collaborative technology is used widely. This collaborative technology is used to identify the object needed for user to carry out process. Two different methods of collaborative technology are used like user method and project method. [5]

3. SYSTEM DESIGN

The main objectives in building a system in android application is: (1) to build mechanism to rearrange the web content for smart phone. (2)To develop an android application to send request to the server search engine. (3)Collect and segment the web page data. (4)The search results need to be rearranged for smart phones. (5)The response for the request sent by smart phones to rendered for user convenience.

The main work here is to build a system for smart phones that allows the user to request the data of their interest through application developed. Once the system is setup the user needs to send the request to server, the server takes upon the request and performs the web crawling. The data of user interest is obtained from the website and is stored back to the server. The server now sends back the data to smart phones and rearranges the data according to user requirement. There is different sequence of carrying out this process of handling user request.

3.1 Build mechanism to rearrange the web content for smart phone.

Develop an android application to smart phones that serve as search engine that allows user to search data of their interest. The system is built in such a way that on press of a button upon entering the user request, the request is sent to the server. The server accepts the request and performs the required actions.

3.2 Collect and segment the web page data.

Once the server collects request from smart phones it performs web crawling. Based on the request sent by user it performs crawling on websites and collects the data of user interest. This extracts only the data of user interest and the collected data is stored back on to the server.

3.3 The response for the request sent by smart phones to be rendered for user convenience.

The collected data which is stored on the server is now sent back as response for the request sent by the smart phones. The data collected from website is stored on the server, after all the user interest data has been collected ,the server sends the data to the user smart phones as per their interest.

3.4 The search results need to be rearranged for smart phones.

After the data is been received by the users on the smart phone system it needs to be re- arranged on the application as per the user preference or request. The rearrangement of data helps the user to view all the data quickly and easily as and when they require.

Accessing data from database

The different kind of data is collected from cyberspace and is stored on to the database. The database stores all the data collected and the user takes out only those data of their interest.
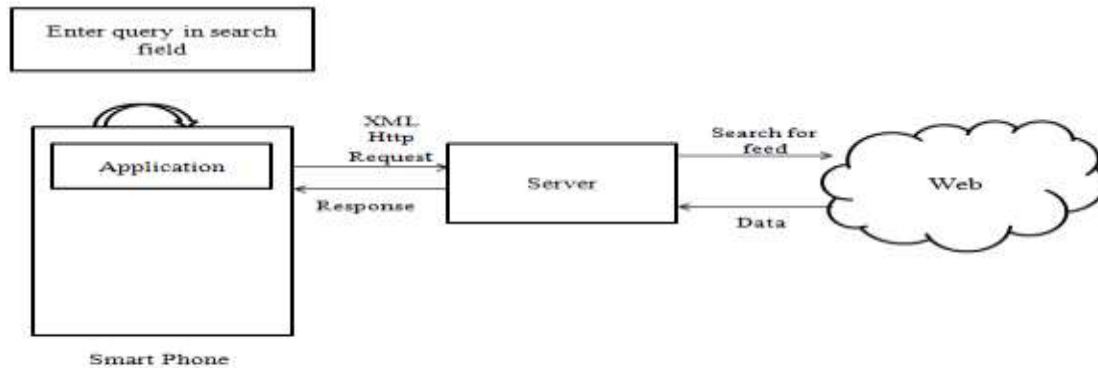
Figure 1: Work Flow

4. EXPERIMENTAL RESULTS

The paramount provocation is to identify what data user requires and how fast and effortlessly we can gather the data from internet. The system being developed by using android platform to handle the user request works very efficiently. This system gives an adapted order to display the extent habitually with satisfied rejuvenated data on web. The aforementioned it allows the humans to exchange the data with pc's and to amend the data that user needs. The people add their own area of interest to collect the data. The bandwidth can also be reduced using the android application and work can be carried out easily. The data sent is now reconstructed and show cased clearly on the screens of the smart phone application.

5. CONCLUSIONS

The productive method to display the data recurrently by rationalizing the information in cyber space with reduced involvement of users. The system developed for smart phones allows the users to send their own message and add the query of their own interest. The main intent of developing this application is to improve the bandwidth, memory and efficiency of the system. The application also rearranges the contents by providing proper alignment and display on the screens of small screen devices.

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