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SURVEY ARTICLE

A Survey on Android's Location Content Search Engine

Kanchan B. Budhakar, Amruta T. Kashid, Rutuja N. Pathare, Sharmila Chopade

Computer Depatment Of Engineering, Pune University, India

kanchanbudhakar@gmail.com, amrutakashid16@gmail.com, rutujapathare6@gmail.com, sharmila2407@gmail.com

ABSTRACT: ***The internet is widely used in day-to-day life. An Android's Location Content (ALC) Search Engine that captures location of users and provides information related to that location. Data mining is done by click through data based on user preferences. In mobile search location information plays an important role. ALCSE has two concepts, location concept and content concepts. GPS is used to identify the user's location. Click through data are stored on the client side ontology files and it is used for storing location and content based information on the server side. To balance the weights between the content and location facets four entropies are introduced. For reranking the data as per user preferences the weight vectors are used. Privacy is protected by storing & collecting clickthrough data on client side. ALCSE server performs the actual computation and heavy tasks and actual results are sent to the client, ALC search engine saves energy of users' mobile.***

Keyword: clickthrough data, reranking, ontology, computation, extraction

I. INTRODUCTION

In this twenty first century people use the internet widely for many personal uses. There are Search engines like Google, Bing, Yahoo, etc. are available but cannot maintain the personalization. A search engine personalization method based on users' concept preferences and showed that it is more effective than method that are based on page preferences which is developed by Leung et al. To overcome drawbacks of existing system android's location content Search engine (ALC search engine) came into this technology's world. There are two classifications based on two concepts that is location concept and content concept that effects on the performance. Users' interests are profiled by PMSC and personalized the search results according to the users' profile. When user wants to search something, he/she has to submit queries to the ALC search engine server, users all the clickthrough data and extracted all the information from backend search engines like Google, Yahoo are stored on an ontology at client. GPS device is used for tracking the location of the users. Consider an e.g. user wishes to visit tourism places in India may submit a query as Tourism places. In that query keywords "Tourism place", ALC search engine understands user's content preference is ("India"). If a user is searching for Shopping mall which is located in Bangalore then this gives the location of all Shopping mall nearby Bangalore to the user. On client side simple tasks such as displaying the actual result is performed. But heavy tasks such as content information, reranking extraction from search engines (e.g. Google, Yahoo etc.) at ALC search engine server. ALC search engine server send HTTP request to backend search engine. This is for

extracting information as per user's query and results from search engine will be in the form of HTML code. HTML parser or DOM (Dynamic Object Modeling) is used to achieve desired results. Privacy is preserved on client side which stores user's profiles. Reranking is done as per user's preferences by matching feature vectors to the RSVM training before sending results to client. At the end only final results are send to the client. ALC search engine has the client-server architecture and distribute tasks to each individual component to decrease the complexity and increase the effective performance**.**

II. EXISTING SYSTEM AND PROPOSED SYSTEM

In the existing system, the interaction between user's and search was limited. A Search engine which is available on the market were not personalized so privacy is not maintained. These search engines does not differentiate content and Location concept so it affect on performance & efficiency of the system. Mobile devices which are available now a days have limited computational power so heavy tasks (i.e Long query) cannot be performed on it and may decrease the performance of the system. User profiles are also not properly maintained. All processing tasks are done on the client side so it may decrease performance. A search engine does not think personally, the task is done on the client side. This drawback is overcome based on two concepts, location concepts and content concepts. ALC search engine represents different types of concepts in different ontology.User location are achieved by GPS devices. These device profile users interest and personalized the search results according to the user profile which is saved in ontology. To incorporate context information revealed by user mobility, we also take into account the visited physical locations of users in the ALC search engine by using GPS. The main processing task is distributed to the server so that it gives effective performance so perfoemance of system is increase.

III. SYSTEM DESIGN

In the ALC search engine client-server architecture

Three important aspects are there first, heavy task and most of the computation task is handling by

ALC search ,engine ,server using RSVM training.

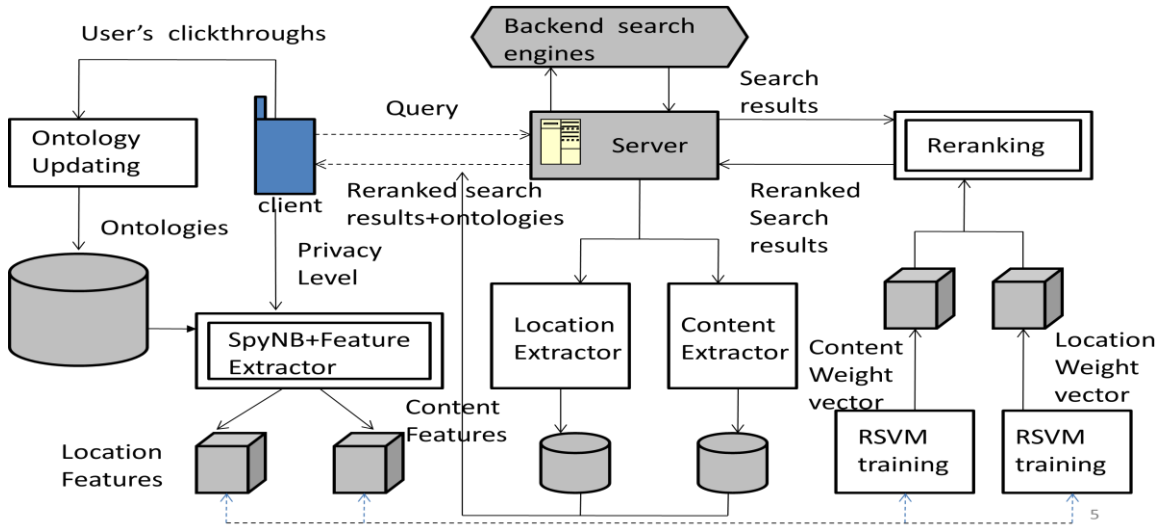

Fig.1 System Architecture

Second, for better performance transmission of data between client and server should be minimized. In the ALC search engine's client-server architecture ALC search engine client is responsible for storing the user clickthroughs and the ontology which is derived from the ALC search engine server. Simple tasks such as updating clickthrough ontology creating feature vectors and displaying reranked search

results are handled by ALC search engine clients with limited computational power. Mobile devices have limited computational power so it decrease the performance of the system. So heavy tasks such as extraction, reranking and training are handled by The ALC search engine server. For improving performance client have to submit query along with featured vectors which collect information from SpyNB+Featured extractor which is then classifies location and content features the ALC search engine server. After that on the server side reranking module will match the featured vector from ALC search engine client side and search results from search engines and after that actual reranked result should be sent to the ALC search engine client. All clickthrough data along with location and content concept will store on ontology's at client side which will continuously update, which maintains privacy.

Module 1: Connectivity between client and server

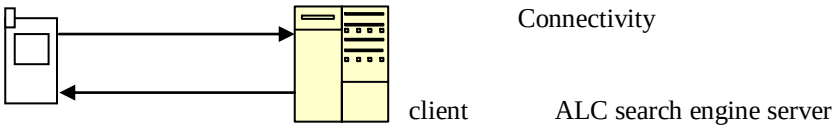

Fig.2 Client-server connectivity

This module includes the connectivity between client and server. Whenever ALC search engine client wants to use ALC search engine server for searching query, then he should login to ALC search engine server.

Module 2: Ontology

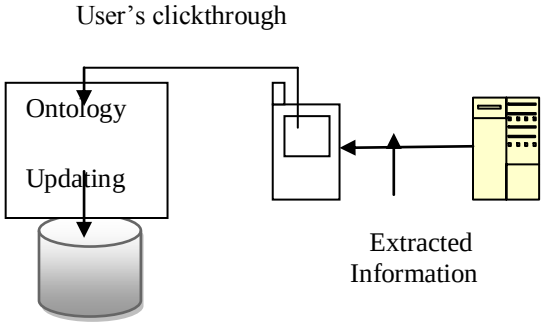

Fig.3 Ontology

After clicking on the search click through data along with location and content concepts are stored on ontology at client side. After that the Feature extractor will collect the click through data from ontology's from client side and is sent to RSVM training on server side. At the server side, there is extracted location and content ontology's. To maintain high privacy client should set high to privacy level so that limited personal information along with features will send to ALC search engine server. And if users want accurate results then the user should set to low privacy level so that all the information will be extracted by The ALC search engine server.

Module 3: Reranking

When a client submit query to the ALC search engine server, then this query will send to search engine. After that reranking module will match the search results and featured extractor from client side and send reranked result to the client.

Module 4: Search Results

Search results from backend engines and clients extract Features from ontology file are manipulated and send to client side. Ontology stores all the information which is extracted from search engine by ALC search engine server.

IV. CONCLUSIONS

We learn ALC search engine personalized the mobile search engine which is based on user's clickthrough preferences. Search queries are classified according to the user's preferences (i.e Content & Location). Search queries are classified in two ways that are location concept and content concept which increases the performance of the system. Click through data stored on ontology's at client side to maintain privacy. Energy can be saved by performing heavy tasks such as extracting and reranking on server side.

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