International Research Journal of Engineering and Technology (IRJET) e-ISSN: 2395 -0056
Volume: 03 Issue: 05 | May-2016 www.irjet.net p-ISSN: 2395-0072

BROWSING THE NEAREST PLACES BY MAKING USE OF KEYWORDS WITH SPATIAL DATABASE

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Abstract - *Now a days there are many applications for users.that aim to find the objects with special word or predicates & predicates with their associated text. Many search engines are used to search anything from anywhere,To find fast nearest neighbor search using keyword IR2 System is used.In this paper finding nearest place simple solution is introduced that is IR2 tree used. There are some drawbacks of this data structure. In order to overcome this spatial inverted index (SI Index)can be used which improves query processing. Spatial inverted index is solution for this problem.*

Keywords: **Inverted Index Retrival (IR2) tree, Spatial Inverted index.**

1.INTRODUCTION

1.1.Data Mining

Data Mining is the concept that data mining (sometimes called data or knowledge discovery) is the process of analyzing data from different perspectives and summarizing it into useful information.

While large-scale information technology has been evolving separate transaction and analytical systems, data mining provides the link between the two. Data mining software analyzes relationships and patterns in stored transaction data based on open-ended user queries. Several types of analytical software are available: statistical, machine learning, and neural networks.

1.2. Introduction

Now a days spatial databases are manages multidimensional objects such as points, rectangles, etc. and provides fast access to those objects based on different select criteria. The importance of spatial databases is Current systems searches location on the basis of their geometric location from the user location. we are developing an application which will search the nearest location with the given keywords. For example if user wants search nearest hotel then he can find it with its famous dish. Means if u wants “paneer tikka” only then she can enter paneer tikka as keyword then it will return nearest hotels which has paneer tikka menu. Solution for best query we are using the IR2 and SI Index algorithm. These are two algorithms are very efficient to search location with the given keywords.

Todays time, the widespread use of search engines has made it realistic to write spatial queries in a brand new way. Conventionally, queries focus on objects’ geometric properties only, such as whether a point is in a rectangle, or how close two points are from each other. We have seen some modern applications that call for the ability to select objects based on both of their geometric coordinates and the associated texts.

For example, it would be fairly useful if a search engine can be used to find the nearest collages that offers "engineering and polytechniques" all at the drink same time. Note that that are not the "globally" nearest collages (which would have been returned by a traditional nearest neighbor query), but the nearest collages among only providing all the demanded criteria and facilities.

we are design a variant of inverted index that are optimized for multidimensional points, and is thus named the spatial inverted index (SI-index). This access method successfully incorporates point coordinates into a conventional i-index with small extra space, owing to a delicate compact storage scheme. Spatial queries with keywords have not been extensively explored. Meanwhile, an SI-index preserves the spatial locality of data points, and comes with an R-tree built on every inverted list at little space overhead. As a result, it offers two competing ways for query processing. We can sequentially merge multiple lists very much like merging traditional inverted lists by ids. Alternatively, we can also leverage the R-trees to browse the points of all relevant lists in ascending order of their distances to the query point. The SI-index significantly outperforms the IR 2 -tree in query efficiency, often by a factor of orders of magnitude. there were easy way to support queries that combine spatial and text features.Queries in spatial database have become increasingly important in recent years with the increasing popularity of some services such as Google map.In Distance search User can measure the distance and calculate time that takes them to reach the destination by giving speed. In Neighbor search we implement our neighbor Search..

2. LITERATURE REVIEW

The author G. Cong, C.S. Jensen, and D. Wu [1] proposed a new indexing framework for location-aware top-k text retrieval. The framework leverages the inverted file text retrieval and R-tree for spatial proximity querying. The different indexing approaches are explored within the framework. The framework encompasses algorithms utilize the proposed index for computing the top-k query, thus taking the account text relevancy and location proximity to differentiate the search space. Results of empirical studies with implementation of the framework damage.Indeed commercial search engines have started to provide location- base services, such as the map services, local search, and local advertisements. For example, Google Maps supports location-aware text retrieval queries. For eg.of location-based services include online yellow pages. The Author Jeffrey Naughton ,Eric Chu [2] proposed to take as input a target database and then generate set of query forms offline with index. At query time, a user with a question to be answered issues standard keyword search queries; but instead of returning list of elements,the system returns forms relevant to the question. The user may then build a structured query with one of the forms and submit it back to the system for evaluation.and also explore techniques to tackle this challenges, and present experimental results suggesting that the approach of combining keyword search and form-based interfaces. The author X. Cao,[3] described the concept of prestige-based relevance to capture the textual relevance of an object to a query and the effects of nearby objects. Based on that, a new type of query, the Location-aware top-k Prestige-based Text retrieval (LkPT) query, is

proposed that retrieves the top-k spatial web objects rank according to both prestige-based relevance and nearness of location . Empirical studies with real-world spatial data demonstrate that LkPT queries are more successfully in retrieving web objects than a earlier approaches that does not consider the effects of nearby objects; and they shows the scalability of proposed algorithms and outperform a baseline approach significantly. The Author Zhiwei Zhu, et al.[4] proposed It shares the same advantages of keyword search on text documents.It produces high quality result.The searches are widely used in several areas such as pattern classi”cation, nonparametric estimation, information retrieval from multi-key databases and in image and speech data compression. The author X. Cao,[5]developed to gives prominence to spatial web data management. Specifically, a spatial keyword query takes a user location and user supplied keyword as arguments and returns web objects that is spatially and textually relevant to these arguments. And to achieve spatial keyword querying functionality that are easy to use, relevant to users, and can be supported efficiently.

3. PROPOSED SYSTEM

To overcome the drawback of existing system design variant inverted index to optimized multidimensional objects we proposed an application for user. We are using two techniques that are SI Index(Spatial Inverted Index) and IR2 tree, but SI index give us a best result than IR2 tree Algorithm. To deal with spatial index as searching the entered keyword and from that find the nearest location having that keyword available and showing the location of restaurant having menus available in map. As our goal is to combine keyword search with the existing location-finding services on the facilities such as hospitals, restaurants, hotels etc. So easier to find the location of nearer restaurant in map having the available keyword.we can also find the nearest location distance.

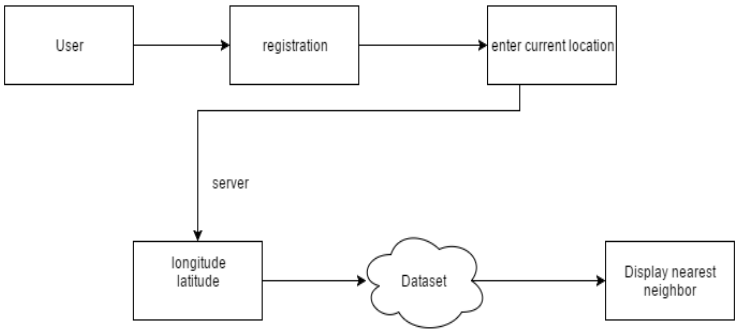

fig:System Architecture

WORKING:

Working of system architecture is given below. In our system there user enter the current location and he found nearest neighbor location. There is one admin these control all the system. Admin add area and location that all data stored into database. All location having specific latitude and longitude according to that value system will be finding nearest location. When user enters current location after that he enters latitude and longitude and he will get exact nearest location according to keyword and category of object.

3.1 .IR2 TREE

IR2-tree are combines the R-tree with signature files. We will review what is a signature file before explaining the details of IR2-trees. Signature file in the general refers to a hashing-based framework, whose instantiation is knowing as superimposed coding (SC),The IR2-tree is an R-tree where each (leaf or no leaf) entry E is augmented with a signature that summarizes the union of the texts of the objects in the sub tree of E. On conventional R-trees, the best-first search algorithm is a well-known solution to search the nearest neighbor . It is straightforward to adopt it to

IR2-trees. Given a query point q and a keyword set Wq, the adapted algorithm accesses the entries of an IR2-tree in ascending order of the distances of their Master Boot Records to q. removing those entries whose signatures indicate the absence of at least one word of Wq in their sub trees. Whenever a leaf entry, say of point p, cannot be removed, a random I/O is performed to retrieve its text description Wp If Wq is a subset of Wp, the algorithm terminates with p as the answer; otherwise, it continues until no more entry remains to be processed. The query point q has a keyword set Wq= {c,d}. It can be algorithm are verified must read all the nodes of the tree, and fetch the document of p2, p4, and p6 (in this order). The final answer is the p6, while p2 and p4 are false hits.

Algoritm:

if take example as hotel searching

step 1:Let HL be the list of hotels along with their latitude and longitude.

step 2:Let Hm be menu available in respective hotel.

step 3:Let Sm be the signature set for each menu

step 4:Let Sh be the signature for hotel list
step 5:Declare HLc is list of Hotel having all menu which
satis_ed query
for each(val in sh)
cheack if(a==val)
ADD hotel in HLc
step 6:Declare Sh1 sorted list of Hotels from HLcs
Declare Dmin is min distance from the list of sorted hotels
HL=sorted list(HLc)
Dmin=min(HL)
step 7:sorting

Drawbacks of IR2 tree:

1.Spatial query with keywords have not been extensively explored.

2.IR2 tree inherits a drawback of signature file: false hit

3.IR2 tree impacted on its efficiency.

4.Signature file due to its conservative nature,may still directly search some object even thoughthey do not have all the keywords.

5. Fail to provide correct answer of difficult input.

3.2.SI-INDEX

Design varient of inverted index that is optimized for multidimentional points and is thus name is Spatial Inverted Index(SI-index). The spatial inverted list (SI-index) is essentially a compressed version of an Inverted-index with the embedded coordinates Query processing with an SI-index can be done by merging or together with the R-trees in a distance browsing manner. Furthermore, the compression eliminates the defect of a conventional I-index such that and SI-index consume the much less space. A spatial keyword query consist of a query area an a set of keyword.

Algorithm:

step 1:Read three values
id-place
x-position y-position

step 2:(a)read x

(b)Let 2D=b1,b2,b3....bn//places convert x to binary values as

b1=binary(x);

(c)Repeat step a b for y create b2

b2=binary(y)

(d)merge b1 b2 and store in b3

step 3:repeat step 1 2 for all places

step 4:generated sorted

step 5:repeat 1 2 for id(places)as x and value from set 2D as

y will store merge result

Let 3D=c1,c2,..cn

Advantages:

1.spatial queries with keywords.

2.SI-index significantly outperform the IR2 tree query efficiency.

4. MODULES

4.1. System Model:

In this module a User have to be register first, then and only then he/she has to access the data base. In this module, any of the above mentioned person have to login, they should be login by giving to them email id and password.

4.2. Map View:

The User can see the view of their location by using Google Map (such as map view, satellite view).

4.3. Distance Search:

The User can measure the distance and calculate time to takes them to reach the destination by giving speed. Chart will be prepared by using these values. These are done by the using Google Maps.

4.4.Neighbor Search:

In this module we implement our neighbor Search. The other problem with this search algorithm is that the indexing information has to be replicated in the broadcast cycle to enable twice scanning. The first scan is for deciding the search range, and the second scan is for retrieving k objects based on the search range.

5. CONCLUSION

The survey of the various techniques for nearest neighbor search for spatial database previous techniques having many drawbacks. So to overcome this drawbacks of previous methods, new method is based on variant of inverted index and R-tree and the algorithm like SI-Index,IR2-tree are used to reduce the search space. In this methods will increasing the efficiency of nearest neighbor search too. main motto is searching a relevant keyword with meaningful information with the minimum time with valid results.

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