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Patient Treatment Analysis in a Crowed Database Model

Shabna K. A[1], Muhammed Shereef[2], Anu Mariya Babu[3], Anil Kumar[4], Alan Winson[5]
[1] *Assistant Professor, University of Calicut, Computer Science Department, I E S College of Engineering, Chittilappilly, Thrissur, Kerala*
[2, 3, 4, 5,] *University of Calicut, Computer Science Department, I E S College of Engineering, Chittilappilly, Thrissur, Kerala*

Abstract*: *In this present world, majority of people are suffering from different kind of disease. There are some diseases, which are hardly to find, and there are some, which are easily, find. For every disease there are set of symptoms. Therefore in this paper, we are introducing a Web Application to predict the diseases by these set of symptoms. An algorithm called Iceberg Algorithm does this prediction. Iceberg Algorithm is the main part of this paper, it is commonly used in data mining, data warehousing, information retrieval and copy detection. Here, Iceberg Algorithm is to prevent from appearing similar data in a search answer. It can be characterised by their huge input and small output.
Keywords*: *Iceberg Algorithm, Symptoms, Data mining, Data warehouse, Copy detection

I. INTRODUCTION

In this world, we have succeeded in automating almost every task, hence to reduce the human effort. Here we would like to introduce Patient Treatment analysis, which used to predict the disease of person through his/her symptoms. At present, we need to go to hospital and consult doctor for each and every disease. And doctor predicts the disease. This method is not accurate enough. We introduce a new method to find the disease using Iceberg Algorithm. Iceberg Algorithm divides the huge database into small relative units that prevent from appearing similar data in a search answer. Iceberg Algorithm can be characterised by their large input and small output.

II. LITERATURE SURVEY

In the work done by V. Chandra and his colleagues is that, Iceberg queries is processed with techniques that cannot scale well to huge dataset, So they proposed a efficient technique to process them easily by considering on Iceberg query with aggregation function COUNT which is having anti-monotone property. They also stated that, count of a super group must be below T, if the count of a group is below T. They also introduce a new evaluation scheme, using set Representation, which increases an effectiveness of Iceberg evaluation. By using this it reduces the evaluation time.

In the work called BAH: Byte-aligned Hybrid proposed by Chenxing and his colleagues, is a compression technique. This BAH is used compress the database without any loss in query efficiency. It does not use more complicated codes. Instead of this, it uses simple rules to encode the raw bitmap and result of it is stored in byte rather than word. The reason for using BAH is that, it performs better in space consumption and query efficiency. Vuppu Shankar and C.V Guru Rao introduce Bitmap indices to optimize execution time of iceberg query. On retrieving of index positions of all 1's from each bitmap index, based on this they developed an efficient algorithm, which take least time for execution. To retain future references that are Iceberg result, XOR operations are conducted. It eliminates all unproductive bitwise AND-operation. Because of this, it reduces the time of execution as compared to all existing algorithms. In this paper, the author is using GROUP BY clause to dynamically group the tuples. By this clause, we can group the related data of a huge database. When querying any of data from database, result will be getting within seconds. Only scalar value comparison can be done in GROUP BY clause by accompanying HAVING clause. Result of using this set predicates are simple and it will be easy for users to formulate. Here the author is using bitmap index based approach. This approach is done by using bitmap indices for processing set predicates on individual attributes. In this paper, we propose web application to predict the diseases of a person by using his/her symptoms. This is done using an algorithm called iceberg algorithm. We compress the database, by grouping the related data into a single dataset. Therefore, it retrieves the result in seconds.

III. PROPOSED SYSTEM

Proposed system is based on Disease detection system to obtain efficient and accurate Query results. Disease detection system has wide database of diseases and symptoms that improves the database every time a user checks it. Users can enter the symptoms they feel and our system checks with matching symptoms and gives specific results enhanced with iceberg query algorithm.

A. Registration

The Registration module is an integrated patient management system, which captures complete and relevant patient information. The patient first should register. It is then added to the hospital database. Once registered all information about the patient will be there in the hospital's database. The patient should first register in this application with patient's detail such as name, age, gender, contact number, address, place, etc. Once registered all relevant information about the patient are stored in the database. The user can view the schedule for a particular doctor; the appointments scheduled for the doctor, the free slots available, blocked slots. Based on the slot availability, the appointment can be fixed. The appointment can be rescheduled and Cancelled based on the scenario. The hospital can track and manage Scheduled Visits, Emergency Visits, and Visit cancellations. The user can also view all patients' previous visitations to the hospital.

1) *Doctor Registration:* Every doctor is properly registered on the platform to ensure the authenticity. The purpose of this module is to provide the user interface and view functions for the doctor and patient base. This is the web application with which the doctor directly interacts.
2) *Patient Registration:* The purpose of this module is to provide the user interface and view functions for the system. This web application the user directly interacts. It communicates with the server to retrieve and modify persistent data when necessary.

B. Authentication

Authentication is the process of recognizing a user's identity. Authentication is accomplished using something the user knows (e.g. password), something the user has (e.g. security token) or something of the user (e.g. biometric). It is the mechanism of associating an incoming request with set of identifying credentials. The credentials provided are compared to those on a file in a database of authorized user's information on a local operating system or within an authentication server. The authentication process always runs at the start of the application, before the permission and throttling checks occur, and before any other code is allowed to proceed. The credential often takes the form of a password, which is a secret and known only to the individual and the system. Authentication is a procedure to verify that received messages come from the alleged source and have not been altered. This checks the validity of user. If new user comes then he has to first make registration on database at server. Users login name, password, shared key or another validator are stored. When user sent request for authentication, its identity will be checked against stored data. If data matched, this process will inform server about authenticity of user. So server generates the valid ticket (TGT) for this user with timeout. The authentication system should allow a system administrator to create user accounts, including login name, password, and appropriate roles and permissions authorizations. TGT is ticket to get ticket used for authentication. User now allowed entering the system. If above process fails then authentication becomes unsuccessful. The authentication system should allow a system administrator to create user accounts, including login name, password, and appropriate roles and permissions authorizations. Server must be able to identify valid user and send that information to the server.

IV. SEARCH QUERY

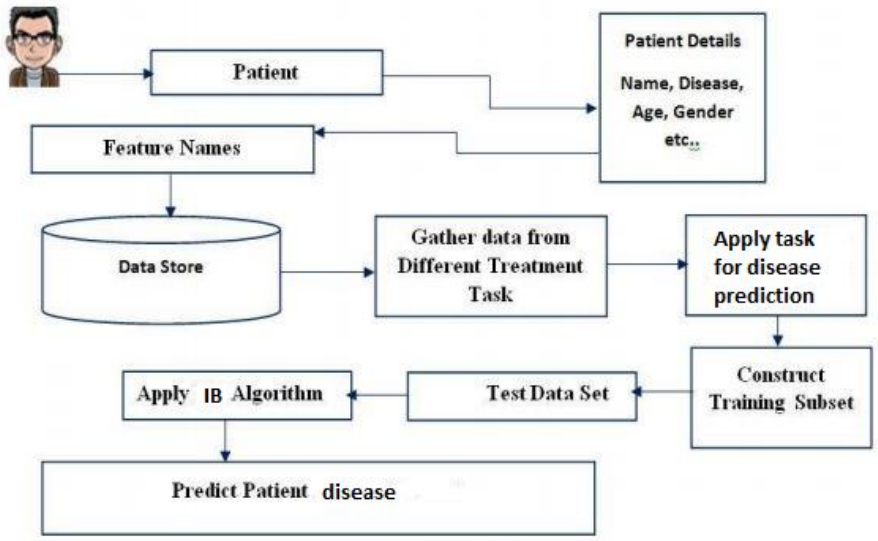
The main module, which enhances the query of a user (patients), is the search query; the user will be having a search bar at home page of our web application, which leads them to other modules. Searching method of a user is entirely different to a normal search bar while comparing to other available resources for time being, ones the user enters their query, the application searches for matching sets in database. Every query is reassembled for enhancing the searching experience of patients in future, for better and reliable results, we use the iceberg algorithm to filter out the unwanted junk data and pinpointed result.

Three major steps of Search Query

A. Building an index
B. Matching the Search Query
C. Searching for proper set

V. ICEBERG QUERY METHOD

Iceberg queries have been recently identified as important queries for many applications. These queries can be characterized by their huge input-small output. The iceberg refers to the input, and the tip of it refers to the output. We present an efficient algorithm for computing an important class of iceberg queries. This algorithm uses a focusing technique for the query result using quantizing. The new algorithm usually requires two or less scans over the input data, which outperforms other algorithms by a factor of two or more. It has several nice properties; it scales nicely with the data size; it is robust against the data distribution. Its memory and computational requirements are small. Further, it is easy to manage. We evaluate its performance using real and synthetic datasets. We believe that the presented algorithm is the algorithm of choice for computing the queries considered in this work.



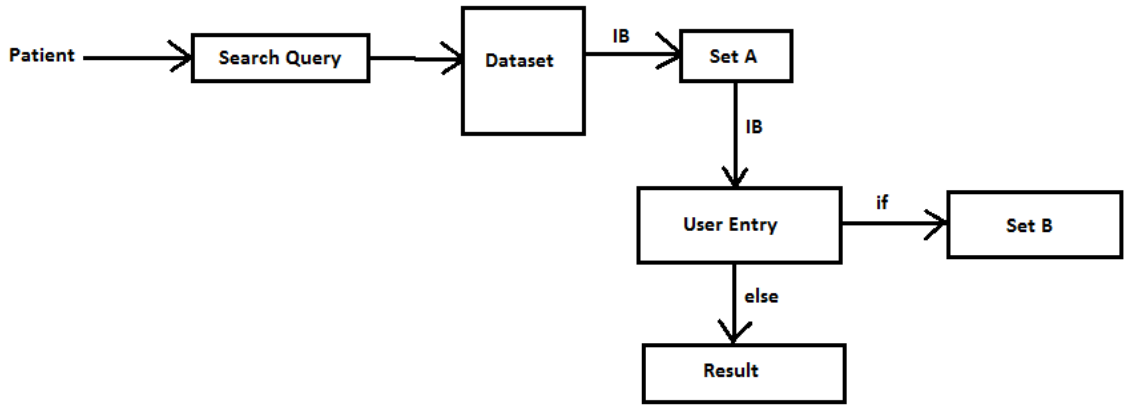
VI. SYSTEM IMPLEMENTATION

When a user is suffering from any diseases, he/she should go to hospital to consult doctor. Therefore, it is very difficult to consult doctor for each and every disease. Here we implement a patient treatment analysis to predict the disease which the user suffering from. It is predicted through their symptoms.

The user as well as Doctor should do registration in a web application. The patient first should register. It is then added to the hospital database. Once registered all information about the patient will be there in the hospital's database. Every doctor is properly registered on the platform to ensure the authenticity. The purpose of this is to provide the user interface and view functions for the system. As the web application, the user can directly interact. It communicates with the server to retrieve and modify persistent data when necessary. Once registered the user can sign in with user's username and password. The authentication process always runs at the start of the application, before the permission and throttling checks occur, and before any other code is allowed to proceed.

The user will be having a search bar at home page of our web application, which leads them to other modules. Ones the user entered their query, the application searching experience of patients in future, for better and reliable results we use the iceberg algorithm to filter out the unwanted junk data and pinpointed result. Three major steps of Search Query: building an index, matching the search query, searching for proper set.

Iceberg algorithm is the algorithm used to compress the huge database into smaller relative units. Due to this compression, the result provided will be pinpointed. While using this algorithm, the time taken for searching the query is reduced. The predicted diseases will be accurate and pinpointed. When the disease is predicted, it also shows the nearby doctors who are specialist in the predicted disease. It also tells the hospital in which the doctors working and time slots in which they are available for.



VII. CONCLUSION

We described through this project, a methodology for predicting the disease caused by the user through a web application. Instead of going to hospital and consult, here is patent treatment analysis. It stores all the details of the patient in a database. When a user registered in this application, he can sign in with his username and password. The authentication of user id has been checked and gets log in to the application. There is search bar in the home page, the user can enter the symptoms which the user is suffering from. Once the user enters the symptom, it checks for the matched set in the database using Iceberg algorithm. At each search query, Iceberg algorithm activates and finds out the pinpointed output.

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REFERENCES

[1] Chengkai Li, Member,lEEE, Bin He, Ning Van, Muhammad Assad Safiullah "Set Predicates in SQL: Enabling Set-Level Comparisons for Dynamically Formed Groups" IEEE Transactions on Knowledge and Data Engineering , Vol. 26, No. 2, FEBRYARY 2014.
[2] Bin He,Hui-1 Hsiao, Member IEEE, Ziyang Liu ,Yu Huang,and Yi Chen,Member,IEEE, "Efficient Iceberg Query Evaluation Using Comressed Bitmap Index", IEEE Transactionson Klnowledge and Data Engineering , Vol. 24, No. 9, SEPTEMBER 2012.
[3] Jayant Rajurkar, T.K.Khan,"Review on Efficient Query processing for Set Predicates of Dynamically Formed Group", International Journal of Advanced Research in Computer Science and Software Engineering,V ol.4,lssue 9,lSSN: 2277 128X,pp no.640-43.
[4] M. Fang, N. Shivakumar, H. Garcia-Molina, R. Motwani, and J.D. Ullman, "Computing Iceberg Queries Efficiently," Proc. Int'! Conf. Very Large Data Bases (VLDB), pp. 299-310, 1998.
[5] G. Graefe, "Query Evaluation Techniques for Large Databases," ACM Computing Surveys, vol. 25, no. 2, pp. 73- 170, 1993.
[6] V.Chandra Shekhar Rao, P. Sammulal," Efficient Iceberg Query Evaluation Using Set Representation", IEEE India Conference, Pune, India, Dec 11-13, 2014
[7] V.Chandra Shekhar Rao, P. Sammulal," Efficient Iceberg Query Evaluation Using Set Representation", IEEE India Conference, Pune, India, Dec 11-13, 2014
[8] Chengkai Li, Bin He, Ning Yan, and Muhammad Assad Safiullah,"Set Predicates in SQL: Enabling Set-Level Comparisons for Dynamically Formed Groups", IEEE Transactions on Knowledge and Data Engineering, vol.26, 2014, pp.438-452.