An Exploration of Collaborative Database through Query Recommender System

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Abstract - Database Management Systems interact with the user to capture and to analyze data. The non-expert user of SQL or the user who is not familiar with database schema face great difficulties in analyzing and mining interesting information from this system. In this paper we have taken a review of Query Recommender System to help these users. This system tracks the querying behavior of each user and identifies current user interesting parts of the database related to the corresponding data analysis task by locating those database parts that were accessed by similar users in the past. It then generates and recommends the queries that cover those parts to the user.

Keyword-Data Mining, Data discovery, Interactive data exploration, query personalization.

1. INTRODUCTION

Database is a collection of pieces of related data. Lots of data are gathered and shared in databases that are navigated and explored for analytical purposes. The database systems are increasingly popular in the scientific community. For example the Genome browser provides access to the genomic database and SkyServer stores large volumes of astronomical measurements. Those databases allows user to submit queries and retrieve the results.

The results of tremendously increased data increases need for data discovery tools. The users often have difficulties in understanding the underlying complicated schema and formulating queries despite the availability of querying tools over large databases. Even though such database systems offer the means to run complex queries over large data sets, the discovery of useful information remains a big challenge. First time user may not have necessary knowledge to know where to start their exploration. Second time, user may simply overlook queries that retrieve important information.

To assist the non-expert user for retrieving interesting information, query recommender system is used. The Query Recommender systems elicit the interest of the user and make recommendations accordingly. That recommended query can be used as templates and submitted as it is instead of composing new ones or it can be further refined. This inspiration draws from Web Recommender System. The premise on which the system is built is simple: If user A and user B placed the same queries then the other queries of each user may be of interest of each other.

2. LITERATURE SURVEY

2.1 Hive-Hive is a data warehouse built on top of Hadoop for providing data summarization, query and analysis. Hadoop is an open source map-reduce software project that enables the distributed processing of large data sets across clusters of commodity servers. Hive is initially developed by Facebook and contributed to community. HiveQL, which is a SQL-like language provided by Hive, provides a mechanism to project structure onto the data and query the data.

2.2 QueRIE- QueRIE, a recommender system, supports an exploration of interactive database. This system assists users who lack SQL expertise or familiarity with the database by presenting them with personalized query recommendations. This system is inspired by Web recommender system. QueRIE tracks the behavior of the past users and identifies the current user interesting parts of the database. It then generates and recommends queries to the user.

2.3 Amazon.com recommendations-At Amazon.com, recommendation algorithms are used to personalize online store for each customer. Based on customer interest, the store radically changes showing programming titles to software engineer, baby toys to a new mother. Three common approaches to solve the recommendation problem are: traditional collaborative filtering, cluster models, and search-based methods.

2.4 Personalized queries-Personalized queries under a generalized preference model present a preference model that combines expressivity and concision. For the selection of preferences related to a query and for the progressive generation of personalized results, which are ranked based on user interest, an efficient algorithm are provided.

3. CONCLUSION

Recommendation system is a prominent field of the data mining used to extract the essential knowledge from an enormous amount of user query logs. Query recommender system assists users for analyzing and mining interesting information.

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