Dynamic Query Forms for Database Queries

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Abstract:
Modern scientific knowledge bases and internet databases maintain giant and heterogeneous data. These real-world databases contain over lots of or maybe thousands of relations and attributes. Ancient predefined question forms don't seem to be able to satisfy various ad-hoc queries from users on those databases. This paper proposes DQF, a completely unique info question kind interface, which is able to dynamically generate question forms. The essence of DQF is to capture a user's preference and rank question kind elements, assisting him/her to form choices. The generation of a question kind is associate unvarying method and is radio-controlled by the user. At each iteration, the system mechanically generates ranking lists of kind elements and therefore the user then adds the specified kind components into the question kind. The ranking of kind elements relies on the captured user preference. A user may fill the question kind and submit queries to look at the question result at every iteration. During this means, a question kind may be dynamically refined until the user satisfies with the question results. We have a tendency to utilize the expected F-measure for measurement the goodness of a question form. A probilistic model is developed for estimating the goodness of a question kind in DQF. Our experimental analysis and user study demonstrate the effectiveness and potency of the system.

Keywords: *Query Form, User Interaction, Query Form Generation*

1. Introduction

Query kind is one in every of the foremost wide used user interfaces for querying databases. Ancient question forms are designed and predefined by developers or DBA in various info management systems. With the rapid development of internet info and scientific databases, trendy databases become terribly massive and complex. In natural sciences, like genetic science and diseases, the databases have over many entities for chemical and biological information resources. Several internet databases, like Freebase and DBPedia, usually have thousands of structured internet entities. Therefore, it's tough to style a set of static question forms to satisfy varied ad-hoc database queries on those complicated infos.ect Samples". a Dynamic question type system: DQF, a question interface that is capable of dynamically generating question forms for users. Different from ancient document retrieval, users in information retrieval area unit usually willing to perform several rounds of actions (i.e., refinement question conditions) before distinctive the final candidates. The essence of DQF is to capture user interests throughout user interactions and to adapt the question type iteratively. Every iteration consists of 2 sorts of user interactions: it contains only a few primary attributes of the information. The essential question type is then enriched iteratively via the interactions between the user and our system till the user is glad with the question results. During this paper, we have a tendency to chiefly study the ranking of question type parts and therefore the dynamic generation of question forms.

2. Existing System

Traditional query forms are designed and pre-defined by developers or DBA in various information management systems. With the rapid development of web information and scientific databases, modern databases become very large and complex. Therefore, it is difficult to design a set of static query forms to satisfy various ad-hoc database queries on those complex databases.

3. Proposed System

We propose a dynamic query form system which generates the query forms according to the user's desire at run time. The system provides a solution for the query interface in large and complex databases. This paper proposes DQF, a novel database query form interface, which is able to dynamically generate query forms. The essence of DQF is to capture a user's preference and rank query form components, assisting him/her to make decisions. The generation of a query form is an iterative process and is guided by the user. At each iteration, the system automatically generates ranking lists of form components and the user then adds the desired form components into the query form.

The ranking of form components is based on the captured user preference. A user can also fill the query form and submit queries to view the query result at each iteration. In this way, a query form could be dynamically refined till the user satisfies with the query results.

4. Advantages

We propose a dynamic query form generation approach which helps users dynamically generate query forms.
The dynamic approach often leads to higher success rate and simpler query forms compared with a static approach.
The ranking of form components also makes it easier for users to customize query forms.

5. Literature Survey

5.1 A Case for a Collaborative Query Management System

New environments are emerging where large numbers of users need to develop and run complex queries over a very large, shared\ data repository. Examples include large scientific databases and Web-related data. These users are not SQL savvy, yet they need to perform complex analysis on the data and are further constrained by the high cost of running and testing their queries, often on a shared server cluster.

5.2 Similarity Measures for Categorical Data: A Comparative Evaluation

In this paper we study the performance of a variety of similarity measures in the context of a septic data mining task: outlier detection. Results on a variety of data sets show that while no one measure dominates others for all types of problems, some measures are able to have consistently high-performance.

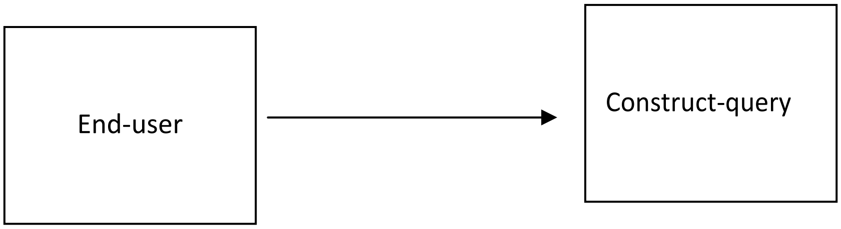
5.3 USER: Improving Data Quality with Dynamic Forms

In this paper, we have shown that probabilistic approaches can be used to design intelligent data entry forms that promote high data quality. USHER leverages data-driven insights to automate multiple steps in the data entry pipeline. Before entry, we find an ordering of form fields that promotes rapid information capture, driven by a greedy information gain principle. During entry, we use the same principle to dynamically adapt the form based on entered values.

6. Related Work

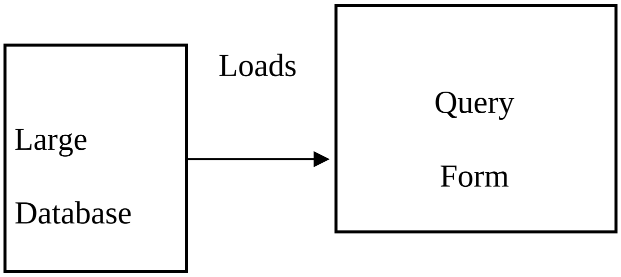
B. Query Form
C. Add Database
D. Execute Query
E. Reconstruct QF

Query Form



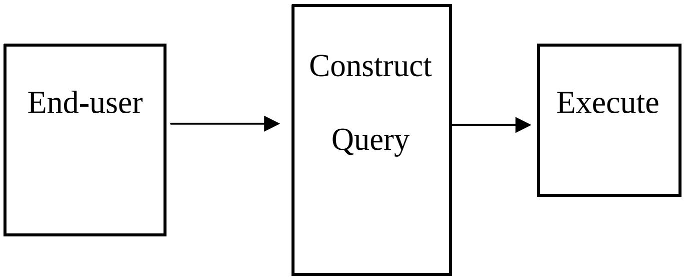
At present, query forms have been utilized in most real-world business or scientific information systems. Existing database clients and tools make great efforts to help developers design and generate the query forms, such as Microsoft Access and so on. They provide visual interfaces for developers to create or customize query forms. The problem of those tools is that, they are provided for the professional developers who are familiar with their databases, not for end-users. This Dynamic query forms allows end-users to customize the existing query form at run time.

Add Database



Database contains the collection of dataset. These large databases are loaded to the Query form page. There are several types of Database drivers are available like Jdbc, Odbc and so on. Each database will be loaded to form and accessed with the help of these drivers. Novel user interfaces have been developed to assist the user to type the database queries based on the query workload, the data distribution and the database schema.

Execute Query



It first finds a set of data attributes, then that are retrieved based on the database schema and data instances. Then, the query forms are generated based on the selected attributes. The query forms are then generated based on those representative queries. If the database schema is large and complex, user queries could be quite diverse. In that case, the end-user can regenerate the query form and can execute that as a new query.

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A solution is that the user inputs several keywords to find relevant query forms from a large number of pre-generated query forms. It works well in the databases which have rich textual information in data tulles and schemas.

7. Conclusion

In this paper we have a tendency to propose a dynamic question type generation approach that helps users dynamically generate question forms. The key plan is to use a probabilistic model to rank type parts supported user preferences. we have a tendency to capture user preference victimization each historical queries and run-time feedback like click through. Experimental results show that the dynamic approach usually ends up in higher success rate and easier query forms compared with a static approach. The ranking of type parts conjointly makes it easier for users to customize question forms.

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