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by

A multi-agent system for querying heterogeneous data sources with Ontology for Reducing Cost of Customized Healthcare Systems

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Abstract:

The Heterogeneous data model and data sources provides an very important platform for the researchers and scientists to contribute in healthcare system. The beauty of such collaborated system is the agents from different end-system or countries gives efforts contributes their knowledge, survey data, patient data, real time health care data to a single research domain. So that the research gets faster results and even cost is eight to ten times reduced. The burden of costly setup, equipments, servers, database query handling apps cost is reduced because of involvement of a group of researchers and multi agent system. It is very important for every end-user or agent to maintain the quality of the input data. The validation of the data source or survey data is important. Ontology is really supporting many organizations worldwide to work together to solve problems under common domain. The Querying Heterogeneous Data Sources provides validated data for improvement in Healthcare system. The system should be regularly updated and it should be keep in concern that the dependency of the ontology based research should not be on either one or two agents. The contribution should be equal and the knowledge of the overall research progress should be to all the health research organizations. Such kind of data structure and data sources are enabling the world to analysis the complex heterogeneous problems and also helps to monitor the possible challenges which world may face during to work for a common domain. This research is focusing on the platform where the use of ontology, agents role and results can be analyzed.

Keywords: Multi-Agent Ontology, Query Data Retrival, Big Data Sources, Query and Healthcare System.

1. Introduction

This is a fact that the world is changing every minute and every second. The new techniques of medical data storage, data processing and data retrieval is introducing world wide. The multi-agent based querying heterogeneous data sources are boosting the research process and providing faster research results using the available data sets. The multi-agent system and ontology have the capability to completely change the way of traditional methods used in collecting data and sharing experience knowledge.
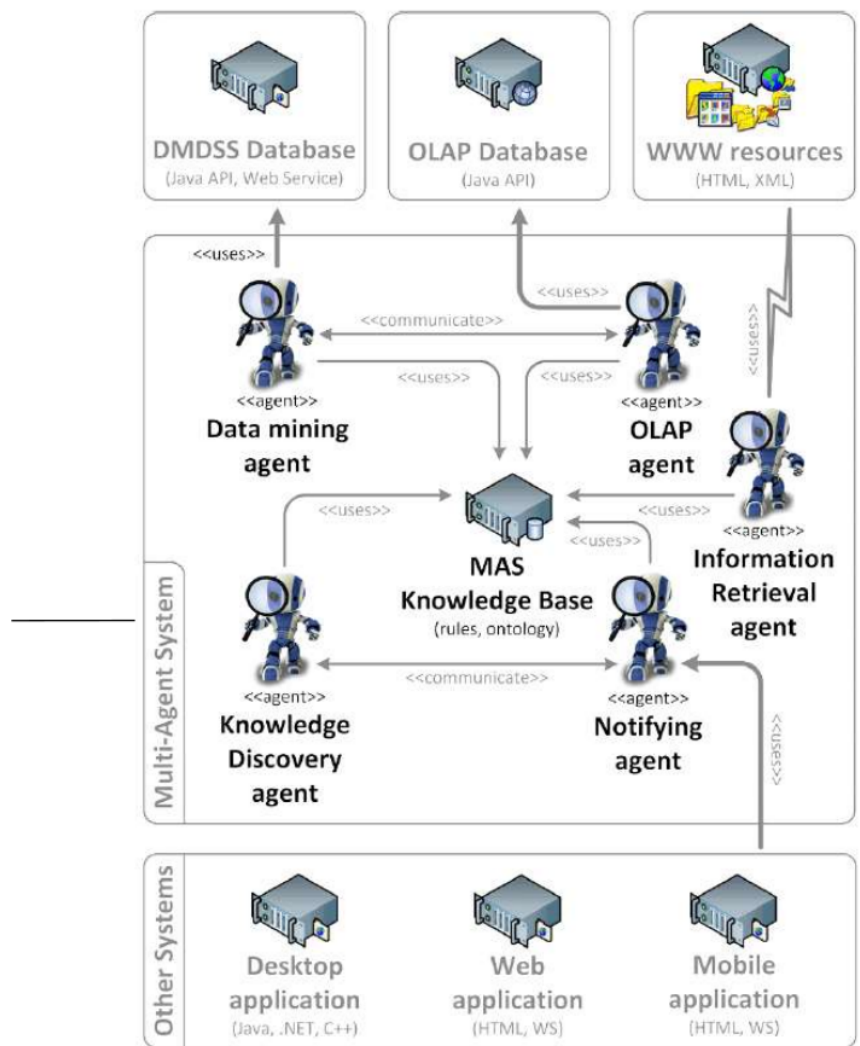
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Figure 1. Multi-agent system and query retrieval for healthcare

The Heterogeneous information model and information sources gives a significant stage to the specialists and researchers to contribute in human services framework. The excellence of such teamed up framework is the operators from various end-framework or nations gives endeavors contributes their insight, review information, tolerant

information, continuous social insurance information to a solitary research space. With the goal that the examination gets quicker outcomes and even cost is eight to multiple times decreased.
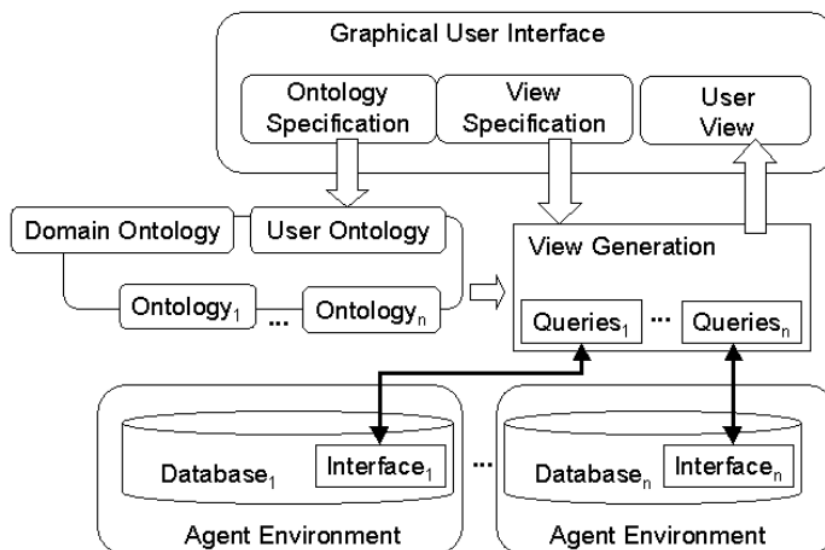
Figure 2. Multi-agent System Architecture and Research Domain

The weight of exorbitant arrangement, types of gear, servers, database question taking care of applications cost is diminished on account of association of a gathering of scientists and multi operator framework. It is significant for each end-client or operator to keep up the nature of the info information. The approval of the information source or review information is significant.

2. Cost Reduction for Customized Healthcare

Cosmology is truly supporting numerous associations worldwide to cooperate to tackle issues under basic space. The advantages of System is

1. Cost is reduced because of common research domain
2. Saves Time
3. Different Researchers, Different Ideas and More Solutions
4. The independent organizations may customize healthcare system according to their place or country
   The Querying Heterogeneous Data Sources gives approved information to progress in Healthcare framework. The framework ought to be consistently refreshed and it ought to be keep in worry that the reliance of the philosophy put together research ought not be with respect to possibly a couple of specialists. The commitment ought to be equivalent and the information of the general research progress ought to be to all the wellbeing research associations. Such sort of information structure and information sources are empowering the world to investigation the complex heterogeneous issues and furthermore screens the potential difficulties which world may look during to work for a typical area. This exploration is concentrating on the stage where the utilization of philosophy, operators job and results can be dissected.In this research the challenges for ontology multi-agent are studied and it is tried to know that how such system can contribute reducing cost.

3. The Importance of Multi-Agent System and Ontology

This Research work portrays a pragmatic methodology for an Ontology Driven Multi-Agent Sensor Web.

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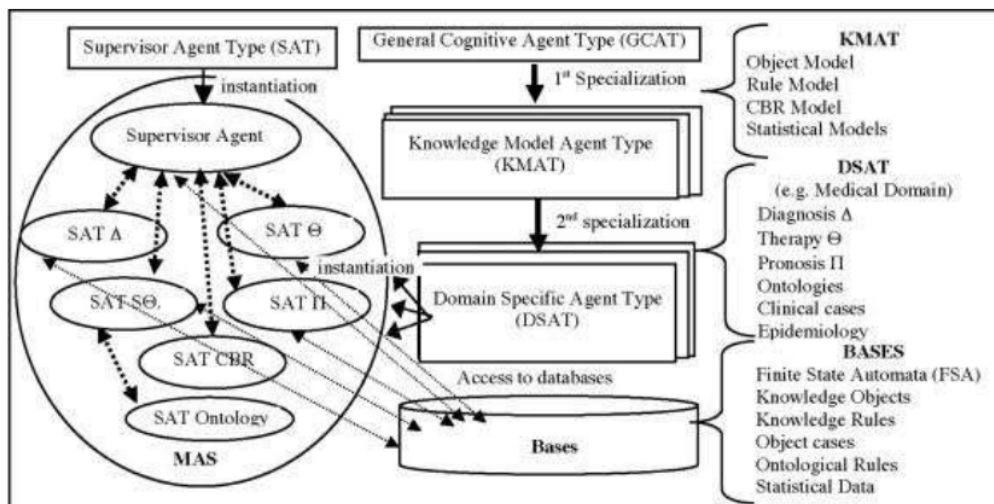
Figure 3. The importance of Multi-Agent system

It explores the issues and difficulties for planning, creating and sending cosmology driven operator based administrations and applications. The fuse and tight combination of ontologies and operators into the Sensor Web can possibly give to always change the manner by which geospatial information and learning is gotten to and utilized.

4. Creating Querying Heterogeneous Data Source Applications

Making extra multi-agent applications Two applications that included data extraction from satellite symbolism were demonstrated and executed. While the out of control fire discovery was moderately basic and served to exhibit the utilization of the system, the casual settlement location application was progressively intelligent of the multifaceted nature of a true satellite picture handling application. It utilizes perceptions from various otherworldly recurrence groups, fuses different picture preparing calculations and an order calculation to characterize casual settlements. The system was seen as satisfactory to demonstrate and execute the two applications.
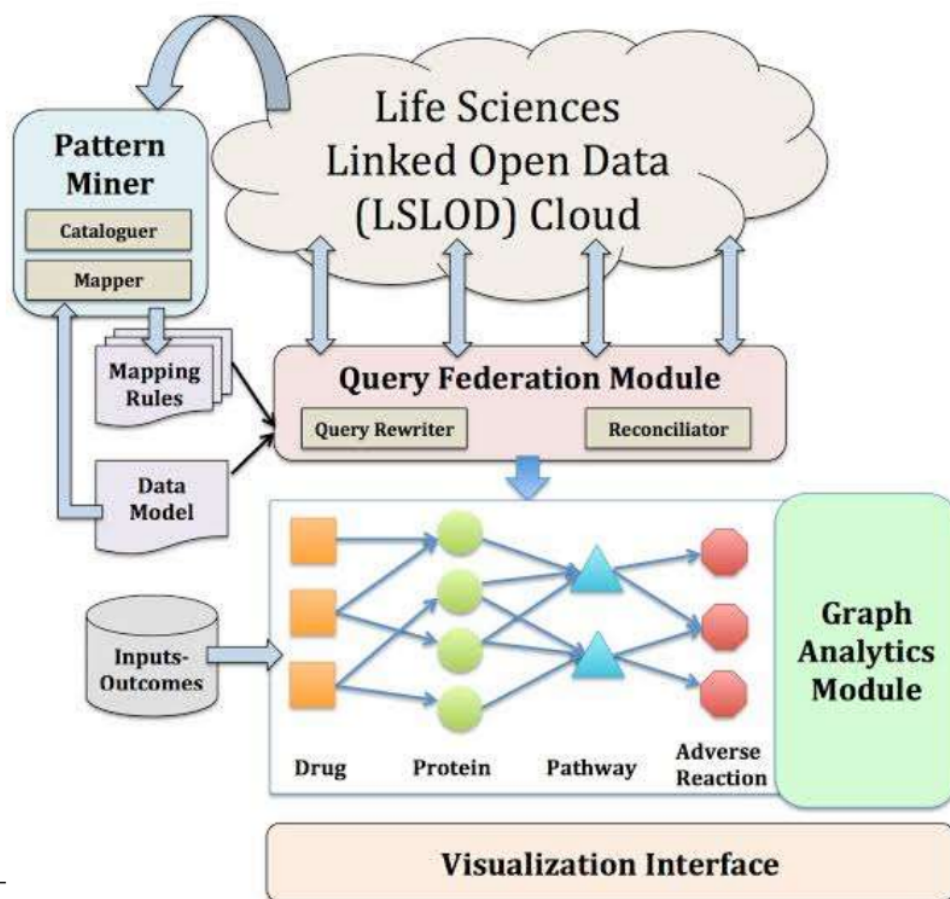
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Figure 4. Cloud Based Querying Heterogeneous Application Architecture.

These applications demonstrates the sufficiency of the system for creating and sending dynamic satellite picture preparing applications. The Heterogeneous data model and data sources gives a noteworthy stage to the experts and scientists to contribute in restorative administrations system. A Data Warehouse (DW) framework is built more than a few heterogeneous information sources. A portion of these sources are interior to the association, while others are outer and begin from an autonomous business association. As DW frameworks have improved, outer information has turned out to be progressively imperative to improve OLAP investigations and basic leadership process.

The particular information (for example contenders' offers) may just exist on the Web. Since the Web is the stage for data distributing, it can likewise be seen as the greatest asset of data of any kind. There is a great deal of important explicit business information like the most current item declaration and other conventional business information.The superbness of such cooperated system is the pros from different end-structure or countries gives attempts contributes their knowledge, study data, getting data, continuous social protection data to a single research region.

With the objective that the assessment gets snappier results and even cost is eight to various occasions reduced. The heaviness of costly plan, sorts of rigging, servers, database

question dealing with applications cost is diminished because of commitment of a social occasion of researchers and multi administrator structure. It is noteworthy for each end-customer or master to keep up the idea of the data. The endorsement of the data source or study data is huge. Mysticism is genuinely supporting various affiliations worldwide to participate to deal with issues under ordinary region. The Querying Heterogeneous Data Sources gives endorsed data to advance in Healthcare structure.

The structure should be routinely revived and it should be keep in stress that the dependence of the cosmology set up together research should not be as for it is conceivable that two or three masters. The dedication should be equal and the learning of the general research progress should be to all the prosperity look into affiliations. Such kind of data structure and data sources are engaging the world to assessment the complex heterogeneous issues and moreover screens the potential challenges which world may look during to work for a run of the mill zone. Below in table the comparison between the manual data handeling and heteregenous data source application is given:

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TABLE 1. COMPARISON OF TRADITIONAL DATA SOURCES AND HETEROGENEOUS DATA SOURCE APPLICATION

	Traditional Manual Data	Individual Organization Data Source	Multi-Agent Based Quering Heterogeneous Data Source
Cost	Very High	Very High	Eight to Ten Time Reduced
Time	Very Long	Very Long	Faster Results
Data Validation	High Chance or Data Redundancy and Errors	High Chance or Data Redundancy and Errors	No data redundancy and High accuracy
Translation	NA	NA	The system automatically detects the native language and convert into meaning ful query results.

This assessment is focusing on the phase where the use of transcendentalism, administrators employment and results can be dismembered.In the two applications situations for reusing and reconfiguring operator administrations were depicted. In any case, these applications were grown freely and in parallel. Specialists were not reused over the applications. Extra applications must be executed, in a perfect world by autonomous engineers, to give further measures to reuse and interoperability.

Conclusion

In this research the cost effectiveness of the heterogeneous data model is studied. The model is compared to other existing data source models and traditional manual data processing models. It can be concluded that the proposed approach not even reduce the

cost for customized healthcare system but also provides more than one solution for the ontology based research for healthcare system. The Heterogeneous data model and data sources gives a huge stage to the pros and analysts to contribute in human administrations structure. The greatness of such collaborated structure is the administrators from different end-system or countries gives tries contributes their knowledge, audit data, tolerant data, constant social protection data to a singular research space. With the objective that the assessment gets speedier results and even cost is eight to numerous occasions diminished.

The heaviness of excessive course of action, kinds of rigging, servers, database question dealing with applications cost is lessened because of relationship of a social affair of researchers and multi administrator system. It is critical for each end-customer or administrator to keep up the idea of the data. The endorsement of the data source or survey data is critical. Cosmology is genuinely supporting various affiliations worldwide to participate to handle issues under essential space. The Querying Heterogeneous Data Sources gives affirmed data to advance in Healthcare structure. The structure should be reliably invigorated and it should be keep in stress that the dependence of the way of thinking set up together research should not be concerning potentially two or three masters.

The responsibility should be comparable and the data of the general research progress should be to all the prosperity look into affiliations. Such kind of data structure and data sources are engaging the world to examination the complex heterogeneous issues and moreover screens the potential troubles which world may look during to work for a common territory. This investigation is focusing on the phase where the use of reasoning, administrators occupation and results can be analyzed. In this exploration the difficulties for cosmology multi-operator are contemplated and it is attempted to realize that how such framework can contribute diminishing expense.

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FINAL GRADE

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GENERAL COMMENTS

Instructor