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Building a Scalable Efficient Service Recommended System

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ABSTRACT
Big data is a new term used to identify the data sets that due to their large size and complexity, which cannot be managed with current methodologies or data mining software tools. This paper presents a scalable, efficient and precise service comparison and recommendation system which enables a shoppers to deeply analyse on what product and in which application to choose from, with ease and fair using a gateway. The shoppers will be provided with clean indexes of various products with its specification, cost and also service rating which is done in a statistical way. The system crawls data from various web applications and loads it in its datasets collaboratively and processes it with batch jobs, so as to categorize, classify and to index the data in a distributed and parallel processing manner. Hence this application stands unique as it doesn't rely on the single service provider. The cart can be reviewed at any time and can be processed whenever the shopper wants the product. All the information will be securely and precisely stored in the user session. The purchase phase look up for the web services of the products service providers and can make the online payment with the banks from service provider.

Keywords:- Square Kilometre Array, Tab Separated Value, Quality Of Service

I. INTRODUCTION

The system competes with the big data problems prevailing in many of the Service Recommender Systems in Market and to build a Scalable, Efficient and Precise System for Service level Comparison between products in Market.Along with the above example, the era of Big Data has arrived. Every day, 2.5 quintillion bytes of data are created and 90 percent of the data in the world today were produced within the past two years. Our capability for data generation has never been so powerful and enormous ever since the invention of the information technology in the early 19th century.

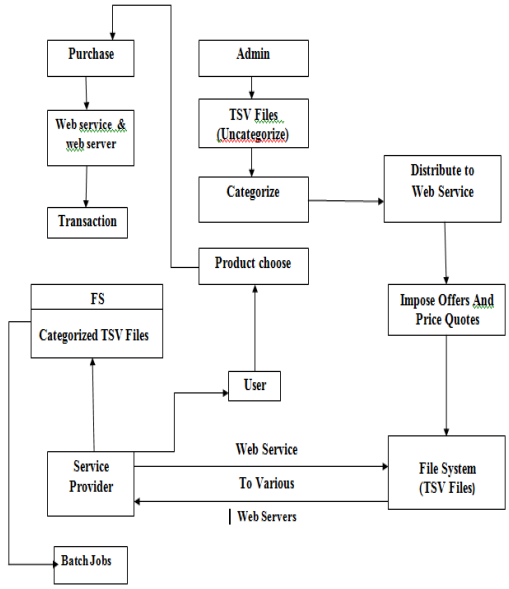
As another example, on 4 October 2012, the first presidential debate between President Barack Obama and Governor Mitt Romney triggered more than 10 million tweets within 2 hours. Such online discussions provide a new means to sense the public interests and generate feedback in real-time, and are mostly appealing compared to generic media, such as radio or TV broadcasting. Another example is Flicker, a public picture sharing site, which received 1.8 million photos per day, on average, from February to March 2012. Assuming the size of each photo is 2 megabytes, this requires 3.6 terabytes storage every single day. Indeed, as an old saying states: "a picture is worth a thousand words," the billions of pictures on Flicker are a treasure tank for us to explore the human society, social events, public affairs, disasters, and so on, only if we have the power to harness the enormous amount of data. The above examples demonstrate the rise of Big Data

Applications where data collection has grown tremendously and is beyond the ability of commonly used software tools to capture, manage, and process within a "tolerable elapsed time." The most fundamental challenge for Big Data applications is to explore the large volumes of data and extract useful information or knowledge for future actions. In many situations, the knowledge extraction process has to be very efficient and close to real time because storing all observed data is nearly infeasible. For example, the square kilometre array (SKA) in radio astronomy consists of 1,000 to 1,500 15-meter dishes in a central 5-km area. It provides 100 times more sensitive vision than any existing radio telescopes, answering fundamental questions about the Universe. However, with a 40 gigabytes per second data volume, the data generated from the SKA are exceptionally large. Although researchers have confirmed that interesting patterns, such as transient radio anomalies can be discovered from the SKA data, existing methods can only work in an offline fashion and are incapable of handling this Big Data scenario in real time. As a result, the unprecedented data volumes require an effective data analysis and prediction platform to achieve

fast response and real-time classification for such Big Data.

II. ARCHITECTURE

Sample Web Applications were built so that the users can compare their products with different Service Providers. The Applications uses sample datasets that has been crawled in Amazon previously. Similar Datasets were prepared for other Applications too using the Meta model that has been crawled earlier. Each Data Set was loaded independently in Various Web Applications. Features and other specifications have been loaded differently for each Application based on the Service Providers Requirement. These Applications have been deployed in Web Servers so that the Application is Up and Running. Web Services have been written on each Web Application so that any third party can communicate with Secure Authentication.



Architecture

Now Our Gateway Application is built which gives users with Recommendations and Comparisons between the Products in the Market. The Users can register and can login to view Various Products Available in Market. This is done by writing a Web Service Client Process for each Service provider. It can connect to the Various Web Applications Web Service and can pull all the needed data's to our backend. A huge Amount of data got accumulated now.Web Crawling looks for web services provided by various web applications.

Generally the Resources provided by Various Web Servers are in TSV Format and should be Batch Processed before Proceeding. For that we use our own API for TSV Manipulation. The TSV files were parsed for data. Theses data's are used for further processing (ie. For Recommendation and comparison).

The Recommendations were given based on the QOS, Availability, Delivery, Offers, Price and Specifications of the particular product. The Users can pick any product so that our application provides with a most Genuine Recommendation and a set of Comparisons. The Users are provided with neat and clean indexes so that he can pick a best provider for a particular product. The picked products were added in Cart and can be purchased later.

III. DESCRIPTION

3.1 Various Web Applications Building And Reviewing

Sample Web Applications were built so that the users can compare their products with different Service Providers. The Applications uses sample datasets that has been crawled in Amazon previously. Similar Datasets were prepared for other Applications too using the Meta model that has been crawled earlier. Each Data Set were loaded independently in Various Web Applications. Features and other specifications have been loaded differently for each Application based on the Service Providers Requirement. These Applications have been deployed in Web Servers so that the Application is Up and Running. Web Services have been Written on each Web Application so that any third party can Communicate with Secure Authentication.

3.2 Gateway Application And Web Crawling

Now Our Gateway Application is built which gives users with Recommendations and Comparisons between the Product in the Market. The Users can Register and can login to view Various Products Available in Market. This is done by writing a Web Service Client Process for each Service provider. It can Connect to the Various Web Applications Web Service and can pull all the needed data's to our backend. A huge Amount of data got accumulated now .Web Crawling looks for web services provided by various web applications.

3.3 Batch Processing Over The Tsv Data And Other Resources

Generally the Resources provided by Various Web Servers are in TSV Format and should be Batch Processed before Proceeding. For that we use our own API for TSV manipulation. The TSV files were parsed for data. Theses data's are used for further processing.

3.4 Picking Products From Recommendations And Purchase

The Recommendations were given based on the QOS, Availability, Delivery, Offers, Price and Specifications of the particular product. The Users can Pick any product so that our application provides with a most Genuine Recommendation and a set of Comparisons. The Users are provided with neat and clean indexes so that he can pick a best provider for a particular product. The picked products were added in Cart and can be purchased later.

IV. CONCLUSION

The system allows for customers located anywhere, a faster, efficient, precise, shopping experience without visiting multiple WebPages for best deals on a particular product. This paper facilitates customers to compare product features and specifications from various web applications and purchase the product with ease. And make payment on the same gateway without the necessity of visiting particular website which provides the best deal. The payment is done through the web applications in the background of the gate way. Hence, the application stands unique, as it does not rely on a single service provider, but provides information a product from various web applications and helps compare, purchase the desired
Product with ease.

V. FUTURE ENHANCEMENT

The proposed strategy can be further strengthened by using various file formats like images, videos and display the products in a enhanced GUI. Further, video representation of various products can be included, customer feedbacks, rating of a products being sold by various sellers, video demo of the product. The proposed system works well and can be used independently with multiple customers logging on gateway at same time.

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