LITERATURE SURVEY

Project Title: Global Market Sales Analytics.

Team Leader :	V.Bala kumar
Team Member 1:	M.Ajith
Team Member 2:	R.Amal
Team Member 3:	K.Karthick Raj

Abstract:

Decision-makers now have access to vast amounts of data thanks to the information age. Big data refers to datasets that are not only large in size but also have a high level of variety and velocity, making it challenging to manage them with conventional tools and procedures. Solutions must be researched and offered in order to handle and extract value and knowledge from large datasets due to the rapid growth of such data. Decision-makers also need to be able to draw important conclusions from the wide range of fast evolving data, including information from social networks, daily transactions, and consumer contacts. Massive data analytics, or the use of sophisticated analytics techniques on big data, can deliver this value. The purpose of this article is to examine some of the various analytics techniques and tools that may be used with big data, as well as the opportunities created by their use in global sales domains.

Introduction:

The way salespeople go about their everyday tasks has altered as a result of recent advancements in information technology (IT) and the increased popularity of social media. Most frequently, a salesforce automation (SFA) system is installed in the salesforce to improve sales effectiveness and customer relationship management (CRM) capabilities. SFA systems are a collection of technologies that make organization easier by disseminating evaluated data to manage customer connections

and sales-related tasks. To effectively accomplish daily objectives, an SFA system offers information on customer contacts, inventory management, sales forecasting, sales, communication history, and pipeline opportunities. Every year, businesses spend millions of dollars implementing SFA systems to improve customer relations and sales results. Imagine a world without data storage, a world where all information about individuals or organizations, all transactions, and all observable aspects are immediately erased after usage. As a result, organizations would be unable to gather useful data and knowledge, carry out in-depth studies, or offer fresh prospects and advantages.

Everyday continuity now depends on information such client names and addresses, product availability, purchases made, personnel hired, etc. Any organization's success depends on its ability to use data effectively. Now consider the breadth of specifics and the explosion of data and information made available now thanks to technological advances and the internet. Huge volumes of data are now readily accessible thanks to improvements in storage capacity and data collection techniques. More data is being produced every second, and in order to extract value, it must be stored and evaluated. Organizations must maximize the value of the enormous amounts of stored data because it is now less expensive to store data. Such data must be stored and analyzed using new types of big data analytics because of their magnitude, variety, and quick change.

Big data of this kind must be correctly evaluated in order to retrieve pertinent information. Huge volumes of data are now readily accessible thanks to improvements in storage capacity and data collection techniques. More data is being produced every second, and in order to extract value, it must be stored and evaluated. Organizations must maximize the value of the enormous amounts of stored data because it is now less expensive to store data. Such data must be stored and analyzed using new types of big data analytics because of their magnitude, variety, and quick change. The publications span the years 2008 through 2013, with the majority of the big data-focused work appearing between 2011 and 2013. This is because big data has recently received a lot of attention. Additionally, a large portion of the research in our corpus comes from some of the best journals, meetings, and white papers produced by prominent businesses in the sector. The majority of articles discussing big data analytics, its tools and methods, and its applications were discovered to be conference papers and white papers due to the lengthy journal review procedure. While big data analytics is being studied in academic settings, many of the industrial

developments and novel technologies offered were primarily covered in papers from the industry.

Literature Survey:

Paper-1: Survey on Growth of Business using Data Analytics for Business Intelligence in Real-Time world [Madamanchi Brahmaiah, Talluri Sreekrishna, 2021].

Data analytics techniques help monitor trends and metrics data that might otherwise get lost in the sea of information. These data can then be utilised to improve processes so that a business or system performs better overall. Data analytics is the science of analysing raw data to draw inferences about that information. Many data analytics techniques and methods have been automated into mechanical processes and algorithms that process raw data for human consumption. The science of analysing raw statistics to draw inferences about data is known as data analytics. The methods and techniques of statistical analysis were turned into mechanical methods and data-painting algorithms over raw data for human consumption. Data analytics help a firm increase productivity. Companies all over the world strive to benefit from having access to statistics in order to increase their productivity and revenue, but processing heterogeneous types of information in order to extract the valuable information is a significant challenge that many firms struggle to overcome. "Big Data Analytics," a generation for storing, processing, and analysing the information, is one of the most important advancements. Groups are using this generation to manage information and put it to use. Businesses can use the knowledge gained through statistical analytics to inform their choices, leading to better results. Planning marketing campaigns, choosing what content to produce, growing businesses, and other tasks become much easier with the help of data analytics. Additionally, data analytics gives you useful information about how your efforts are performing so you may fine-tune them for the best results. Data analytics provide you more knowledge about your clients, enabling you to better understand their needs, provide more individualized service, and forge stronger connections with them.

Paper-2: Impact of big data analytics on sales performance in pharmaceutical organizations: The role of customer relationship management capabilities [Muhammad Shahbaz, Lili Zhai, et al, 2021].

Data analytics is a process of analysing raw data to draw conclusions about a certain piece of information. It is used to help individuals and organisations make sense of data. They are used to analyze unprocessed data in order to find trends and insights. By examining certain datasets and seeing trends, we can draw inferences about the information they contain. A unique set of hardware and software is used for data analytics. These techniques and technologies are often used in a range of business areas to enable companies to make informed business decisions. Additionally, the analytics enable businesses to respond swiftly to shifting market trends and gain an edge over rivals. Some of the elements of this analytics process can be useful for many endeavors. By combining these features, a strong data analytics programme will show you clearly where you are, where you have been, and where you should go. The ultimate goal of data analytics, however, is to enhance company performance. The data that is evaluated may be made up of new data that has been processed for real-time analytics or historical records, depending on the particular application. Data analytics employs a range of software tools, such as spreadsheets, data visualization and reporting tools, data mining software, or open-source programming languages, for the most efficient data manipulation. Particularly for advanced analytics projects, the data analytics applications inside the data analytics process entail more than just data analysis. Following data analysis, charts and other infographics may be created to help the reader understand the results. Applications for BI dashboards that present data on a single screen and can be updated in real-time as new information becomes available frequently include data visualizations.

Paper-3: Data Analysis and Visualization of Sales Dataset using Power BI [Ms. Sarika Singh, Ms. Lavina Jadhav, 2022].

With the use of data analytics, businesses can examine all of their data to find trends and develop insights that can be used to guide and, in some circumstances, automatically automate choices. The top solutions available today provide end-to-end analytics, from data access, preparation, and analysis through operations analysis and outcome monitoring. To ensure the eccentricity of data analysis results, the fundamental step while analysing data is to specify the objects to be investigated and segregate the data time period analyzed. If data cannot be evaluated, interpreted, and used in context, it is useless.

Business analytics may assist paint a picture by visualizing data to give retailers business insights because a picture is worth a thousand words. With this knowledge, firms can modify their future plans in a significant way to increase profitability and success. The majority of unprocessed raw data, particularly large-scale databases, are useless. By employing Power BI tools, we can glean insightful information from this bit store. Reading and analysing the various data sets is the major objective here in order to produce business overviews and insights. Any organisation, firm, or business's ability to succeed hinges on how well-run each business division is. the sole area of the company that generates income, pays expenses, and makes money. Here are some reasons why selling is important: Although the term "sales data" is broad and include a variety of indicators, in general, actionable sales data is anything that can be measured using the sales process. Data analysis aids in idea understanding for pupils through visualization. Although there is a wide range of technology accessible for business data analysis, the Power BI visualization technique is the most widely used for learning the fundamentals of data analysis. Data representation and understanding can be done fast and simply with the aid of visualization techniques. For a conceptual design that is sounder, this tactic is helpful.

Paper-4: Data mining with its role in marketing, sales support and customer identification data analysis [Mohammed Bin Ali Al Atif, Ahmed H. Shakir, et al, 2022].

Every business wants to provide its sales team with a sustainable sales force automation system in the modern, technologically sophisticated world in order to boost sales performance and customer connection capabilities. This study investigates how big data analytics affects an organization's ability to generate sales. The way salespeople carry out their everyday tasks has altered as a result of recent advancements in information technology and the growth trend of social networks**.** The technological revolution and the emergence of sources like social networks have led to an unparalleled rate of data generation regarding consumer purchasing behaviour.By focusing on prospects and increasing close rates, sales performance aids in the efficient and successful achievement of sales process objectives**.**

By revealing hidden patterns in BD, the data analytics technology or system produced in this study helps in the formulation of successful sales strategies by offering helpful insights into consumer behavior. Organizations must employ data

analytics tools to satisfy their needs in the big data era since the way sales strategies are developed has changed. Individual perceptions of big data analytics are thought to depend on personal traits. Companies might use other models in the comparison to increase the comparison's objectivity and produce accurate data analysis results. In this era of data overflow, data analytics is extremely important and can offer unexpected insights and advantages to decision makers in many different fields. Big data analytics has the ability to serve as a foundation for development if used effectively. Valueable information can be derived from the data and used to support and enhance decision-making by using such analytics.

References:

1. ”A Fast Distributed Algorithm for Mining Association Rules”,Proc. Parallel and

Distributed Information Systems; D.W. Cheung, et al., IEEE CS Press, 1996,pp.

31-42.

2. ”Introduction: Recent Developments in Parallel and Distributed Data Mining”,

Distributed and Parallel Databases; M.J.Zaki and Y. Pin, vol. 11, no. 2, 2002,pp.

123-127.

3. ”Efficient Mining of Association Rules in Distributed Databases”,IEEE Trans.

Knowledge and Data Eng.; D.W. Cheung , et al., vol. 8, no. 6, 1996,pp. 911-922.

4. ”Mining Association Rules Between Sets of Items in Large Databases”; R.

Agrawal, T. Imielinski and A. Swami, Proc. ACMSIGMOD Int’l Conf. Management

of Data, , May 1993.

5. ”The Data Warehouse Toolkit, The Complete Guide to Dimensional

Modeling”,2nd edn. John Wi-ley & Sons; Kimball, R., Ross, M., New York (2002).

6. ”New Algorithm for Fast Discovery of Association Rules”, Technical Report No.

261; Zaky, M.J., Parthasarathy, S., Ogihara, M., Li, W., University of Rochester(1997),http://cs.aue.aau.dk/contribution/projects/datamining/papers/tr651.pdf.

7. ”Web for Data Mining: Organizing and Interpreting the Discovered Rules Using theWeb”,SIGKDD Explorations; Ma, Y., Liu, B., Wong, C.K., Vol. 2 (1). ACM Press, (2000) 16-23.

8. ”Communication-Efficient Distributed Mining of Association Rules”; A. Schuster and R. Wolff,Proc. ACM SIGMOD Int’l Conf. Management of Data, ACM Press, 2001,pp. 473-484.