# Importance of Data Integration in Discovering the Techniques Considering Data Architecture, Data Mining, Warehouse Intelligent Knowledge, Data Exchange

## Dr.K.Balaji[1]*, Sunil MP[2]

[1] Surana College, Bangalore, India.
[2] Assistant Professor, Department of Electronics and Communication Engineering, Faculty of Engineering and Technology, JAIN (Deemed-to-be University), India.
*Corresponding Author Email: [1] balaji.mca@suranacollege.edu.in

*Abstract*

*The entire research has performed to analyse how data integration helps to discover the techniques considering data architecture, data mining, warehouse intelligent knowledge, data exchange. Data is one of the most significant assets for the modern day's business companies as it provides the assistance to perform the overall business of a company with more strategic process while become more oriented with the consumers need. It helps to proceed with more convenient and effective decisions within business which helps to gain higher business advantage. The entire study have been followed inductive approach, qualitative types of design and secondary data collection process in order to make most effective results on the study topic. A multiple numbers of concepts associated with data integration, data architecture, data mining, warehouse intelligent knowledge, data exchange has discussed within the study. It helps to gain a higher grip over the topic and evaluate the overall study most efficiently. The entire advantages and process of data integration to adopt effective data architecture, data mining, warehouse intelligent knowledge, and data exchange have been analysed within the entire discussion. It will provide a superior insight about the topic which helps business organizations to adopt most suitable data analysis and decision making strategy in the competitive business sphere.*

*Keywords*

*Business, Data architecture, Data integration, Data mining.*

## INTRODUCTION

It is said that the modern world is actually involving itself with searches for data as it becomes the most important asset of an enterprise in order to perform their entire business operation within a right track. Data actually helps to improve the knowledge and insights of certain issues, the overall purchase oriented insights and decision making process can be assumed through analyzing the data about the phenomenon through the assistance of various modern tech gadgets and with a few statistical analyses. The entire product designing, manufacturing, marketing and other performance of a company can become mostly consumer oriented through analyzing social data of the consumers and helps to gain more attention of the consumers which helps to increase the sales and revenue earning of a company in the global market. It is the basic cause that most of the leading business organizations have been engaging themselves with an absolute data mining and data exchanges process to assume the best suited strategy for the enterprise which could provide superior business growth in the international business periphery. A huge number of institutions have applied suitable data architecture and warehouse intelligence as it provides the scope to gain higher business advantage in the worldwide business sphere.

Data integration is one of the key processes which help an organization to fetch and witness the entire data set from a diverse area within a singular prospect. The overall process of data integration mostly helps to analyse the entire essential data set of the company with an organized and specified process. The definition of data integration is the entire process of gathering the all fetched, mined, exchanged data of a company within a unified view [1]. It opens up the gateway for an enterprise to freely avail the necessary data in time of need as well as make it easier to be consumed by the systems and users within the institute. The overall security of data becomes more integrated and strong through the assistance of data integration which makes it easier to monitor entire inventory statistics, mining consumer's data, and exchange necessary information of an enterprise in the global periphery. In brief, the entire architecture of an institute becomes more flexible, secure and uniform in nature through the assistance of data integration.

This particular study has been involved to determine how data integration helps to discover the techniques considering data architecture, data mining, warehouse intelligent knowledge, data exchange. It will focus the entire assistance of the data integration and analyzing the theories of data architecture, data mining, warehouse intelligent knowledge, data exchange to find the results of the topic. The objectives which are involved with the entire are mentioned below.

**Objectives**

- To know the entire concepts of data integration.
- To evaluate the overall advantages of data architecture, data mining, warehouse intelligent knowledge, data exchange in business.
- To understand the theories which are related with data architecture, data mining, warehouse intelligent knowledge, data exchange.
- To know the assistance of data integration to explore the technique of data architecture, data mining, warehouse intelligent knowledge, data exchange.

## MATERIALS AND METHODS

It is highly necessary to select the entire materials and method which will be used in order to gain an idea of a certain topic through gathering data, illustrating them, evaluating and analyzing those data and to make proper interpretation of data and findings within the entire study. It actually provides a key assistance to find the overall result or output while performing a study on a certain topic. The overall methods and materials which use in time of performing this particular study have been discussed in this part. It will provide superior assistance to know about the overall proceedings which could be used within this study to gain the most effective result or output.

This particular study has been performing its entire activities on the topic data integration helps to discover the techniques considering data architecture, data mining, warehouse intelligent knowledge, data exchange. THz, it is essential to gather a number of topic oriented information to perform the study. Inductive design most significantly provides the assistance to perform a certain study while taking various topic oriented data [2]. Hence, the study will follow an inductive approach within its entire operation. Qualitative type in gathering data helps to collect various non-numeric data within a study [3]. It will help to gain a proper idea about the topic; hence it will be used to perform this study. A secondary data collection process has been selected to gather information about the study. Secondary data collection helps to gather a huge set of data from sailing various primary data sources available on the internet [4]. Data from authentic sources which have been published after 2019 has been taken within the inclusion criteria and others are addressed as external criteria to perform this particular study.

## RESULTS

**Idea of data integration and its applications**

Data integration is one of the highly popular areas of modern day business due to its superior assistance to analyze certain data with effective proceedings. According to, [5] data integration is the overall process or technique of consolidating different data and information from diverse sources within a singular data set to improve the accessing and delivering operations in time of need. It *has* been helped

to organize the entire sourced data to be with superior and systematic processing which helps to perform the entire data sourcing tasks in a certain moment in an easier and efficient way. The entire accessibility of the data has been gained through robust assistance through implementing the overall process of data integration practice within business. As mentioned by [6], the overall performance of data accessibility and delivering operation across the area of diverse subjective and structural prototype with a consistent and quicker process which helps to meet the need for information in business processes. The entire decision making proceedings of an enterprise become more efficient through analyzing data about phenomena in a uniform and structured way through the support of data integration.

A huge number of business companies in the global market have been involved them while performing the tasks of data integration. The leading analytical institution SAS has met the 15.3 percent of the data integration market in international business periphery in the fiscal year of 2019 [7]. It showcased the increasing demand of data integration in the data analysis market. The overall demand and the need of the consumers can be more effectively met by an organization through using data integration practice within business. Hence, many of the companies belonging to the higher position in the business hierarchy have started using the assistance of data integration in designing and marketing areas to improve consumer satisfaction and retention rate in the worldwide atmosphere.
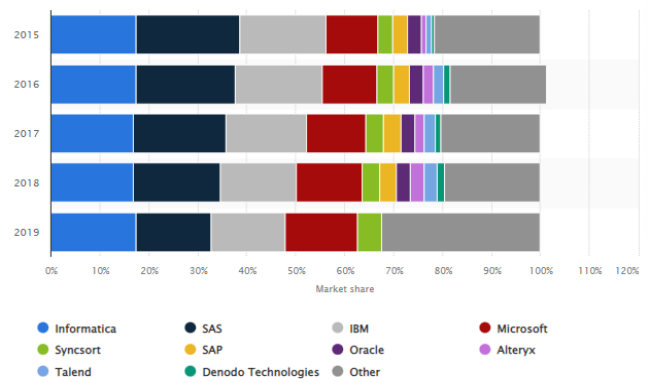


**Figure:** Analytic data integration software market share

The entire process of data integration opens up the gateway to use the collected data most efficiently to make the most effective strategic plan for an enterprise in the global market. As mentioned by [8], the entire proceedings which have been involved with the concepts of data integration bring together different data from different sources which make the dataset more valuable and easy to be implemented within the business process. It mostly assists an enterprise to improve the overall performance rate of the company in the global market and provide the opportunity to gain superior satisfaction rate of the consumers in the competitive market. Thus, it provides a high support to gain a superior business advantage and more opportunity of succession within the business market. According to [9], the overall process of data

integration processes data from different areas within a uniform and centralized location as a data warehouse and increases the overall potentiality to store data with a large volume. The entire architecture of the data becomes more flexible and highly secure through the support of data integration.

Most of the business enterprises have achieved more powerful analytical ease of data through using data integration processes. According to [10], data warehouse within data integration practice provides the options for run queries, launch reports, make data analysis and accessing information with an effective and consistent manner. The entire servicing and manufacturing decisions become easier through analyzing feedback of the customers using data integration. In 2019, the market revenue earned by data integration software was approximately 3.37 billion U.S. dollars [11]. It replicates the superior assistance of data integration within the business process of a company in the business sphere globally.
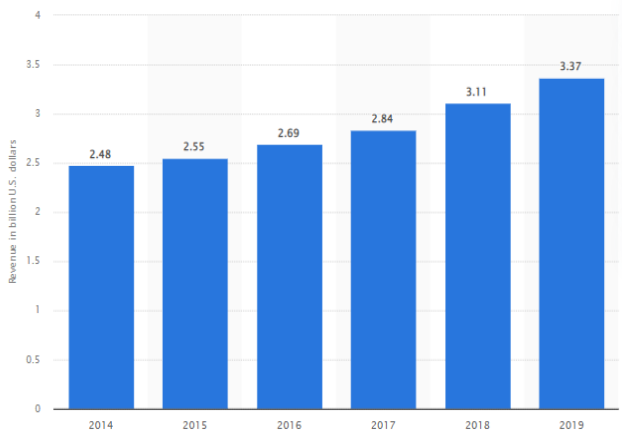


**Figure 2:** Market revenue of the data integration process

**Concepts of data architecture, data mining, warehouse intelligent knowledge, data exchange**

*Data Mining-*

Data mining is the entire process which helps to analyse data from a large volume of source. It helps to find the overall purchasing pattern of the customers, evaluate latest trends in the market and helps to generate insights from the dataset which can be used for an organization in global market periphery. As mentioned by [12], the use of data mining helps to make exclusive analysis of a certain data set and helps to make suitable decisions for a company which helps to gain high business growth in the competitive sphere. The advanced analytical features provided by data mining helps to extract most useful findings from the entire set of accumulated data and information. Various modern day machinery, AI have been also used within data mining and helps a company to take most suitable decisions and strategies in a business market environment. The entire business growth rate can be improved through analyzing relevant data using data mining applications.

*Warehouse intelligent knowledge-*

Warehouse intelligence is actually the throughout process of managing that inventory and storage through the assistance of various modern technology and data analysis techniques within business. A huge number of companies in today's global market have adopted the entire mechanism of intelligent warehouses to store and use resources with an effective process in the market. According to [13], an intelligent warehouse is actually a warehouse system which involves itself with various different modern gadgets and automation business processes. It most efficiently stores and provides access to the entire data and resources in time of need which helps to avail higher performance rate in the worldwide market area. The effective application of warehouse intelligence knowledge most effectively helps a company to perform their overall warehousing operation more efficiently as well as helps to improve the productivity rate of the company in the global periphery. Most of the leading companies have used the concept of warehouse intelligence in order to gain higher productivity and revenue earning in the international business market atmosphere.

*Data architecture-*

The overall process of data architecture provides most significant assistance to enterprises to use and implement the overall findings while analyzing the stored data. As mentioned by [14], data architecture is the entire technique of managing collected data and enhancing the entire transformation, distribution and composition of the data according to the demand or needs. It is one of the key steps which enhance the data processing operations of an enterprise through implicating the access of artificial intelligence. The entire data collection, integration, storing as well as delivering operations become smoother through the help of data architecture. The assistance of data architecture helps to avail data more efficiently and increase the entire accuracy of the data analyzing operations of a company more promising. The entire decision making process utilizes a superior guide through the support of data architecture used within a certain working periphery. It helps to take the most suitable business strategy in the market and enhance the entire competitive advantage of the company in the worldwide market.

*Data exchange-* Data exchange is one of the most helpful processes of sharing data to its most desirable destination in the international market area. According to [15], the overall data receiving and sending operations become more smooth and effective through the help and assistance of the data exchange features. A business company is able to gather the desired data and findings in their business through the help of data exchange as well as are able to share data about phenomena more securely and quickly through implicating data exchange processes in the business market area. The entire international and transformation operations of data or information gained superior support through the technical guidance and support through the data exchange process. The

overall risks of data redundancy while sharing or receiving necessary data reduces through the help of data exchange operations and helps an enterprises to perform their business more prominently. It helps to avail a higher business growth in the international periphery.

**Relation of data integration with different components**

The entire operation of data accumulating, data accessing, data mining and the data storing operation can be able to achieve a higher assistance through the help of data integration operation in business. The entire technique of making best suited data oriented architecture and warehousing become easier through the support of accessing data integration within the entire operational area of an enterprise. As mentioned by [16], data integration has engaged itself to make a prominent data gathering from a huge set of data and information from various different sources within a unified pattern which helps to perform data mining operation more effectively and efficiently by an organization in the global business market sphere. Hence, the data mining technique process can be discovered through the assistance of data integration within business. Various business companies performing their business in the global market avail the singular representation of data through data integration process which helps to improve the data mining process of an enterprise in the international market.

The overall process of gathering uniform data from a certain set of data in data mining becomes easier through accessing the data integration process within data mining. Data integration process helps to extract data from a huge set of diverse sourced data outcomes within a company. Data integration has involved itself while accessing the assistance of the data warehousing through the help of modern days block chain technique and artificial intelligence which helps to improve the performance of the data storing with an effective process. According to [17], the entire data warehouses and data extracting operation become more fluent through organizing the entire data sets within a singular view through the help of data integration. It mostly helps an enterprise to perform entire data analysis and data extraction proceedings through the assistance of the data integration.

The entire technique of intelligent warehousing can be learned and easily adopted by an organization in the global market through the assistance of data integration in the international market atmosphere. It provides a key assistance to an enterprise to undertake most suited business decisions and strategies through analyzing the entire datasets gathered from diverse sources and areas. As mentioned by [18], the entire market value of the WMS has been reached to 1.37 billion U.S. dollars through the application of the data integration technique in the worldwide market environment. It replicates the superior assistance and demand of data integration in order to perform the overall process of data architecture, data mining, warehouse intelligent knowledge, data exchange more efficiently.
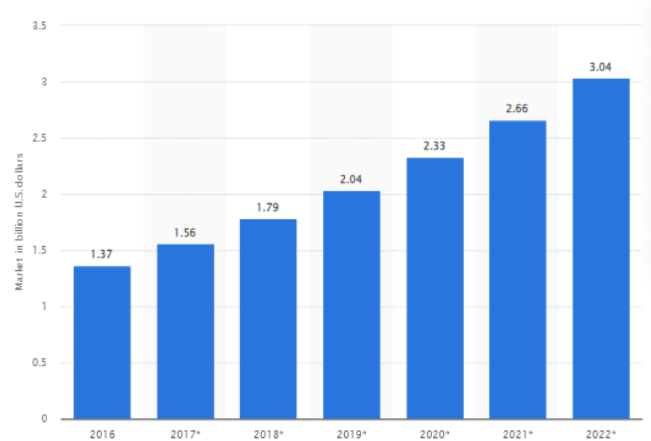


**Figure 3:** WMS market size globally

**Advantages of data integration**

There are a huge number of advantages which are associated with the overall process of using data integration which is discussed below.

*Improve data integrity and quality:*

The entire process which has been taken within the process of the data integration provides the key assistance to unify the data within a singular structure or view sites. It mostly helps to improve the integrity of the data which helps to improve the performance of an enterprise in the global periphery. The overall quality of data also improved through the technique which was used within the data integration.

*Improve connection with different data sources:*

The use of data integration mostly helps an enterprise to fetch a number of data and information from variable sources with a singular pattern or structure. A business enterprise could be able to increase the level of the connection with the different sources of data through data integration. It helps an organization to avail different data sets from diverse sources and helps to strengthen the connectivity with the different data sources in business periphery.

*Improve analyse of the data:*

The visualization process of data which has been processed through the help of data integration provides a key support to an institute to analyse entire sets of data more efficiently which helps to gain higher competitive advantage in the market periphery. As mentioned by [19], the entire data analysis operation becomes easier through the help of data integration. It helps to avail higher business advantages in the international market.

*Help to take suitable business decision and strategies:*

A business company in an international market has to undertake a number of decisions and strategies through analyzing overall stored data within their working sectors. The overall process of taking business strategies becomes easier as the data integration assists to analyse collected data in a more effective way.

## DISCUSSION

The overall study has kept its focus on evaluating data integration and helps to discover the techniques considering data architecture, data mining, warehouse intelligent knowledge, data exchange. The entire study has been able to find that the overall assistance of the data integration most significantly helps an enterprise to gain a higher business growth through performing warehousing operation, data mining, data extraction, and data architecture more efficiently. The entire study has been discussing the overall concepts of data integration which have been helped to evaluate the entire topic more effectively. The entire process of data integration involves making a singular visualization of the entire data sets from diverse locations which mostly helps an enterprise to fetch and share the necessary data and findings in time of need with a quicker process. The entire enhanced and analyzing process of data has gained superior assistance through the help of data integration techniques. The entire data storing capacity becomes more effective and secure through Appling data integration processes using block chain and artificial intelligence in the global market sphere.

The entire study has kept its focus on analyzing the overall tasks of how data integration helps to perform the data mining, data exchange, warehousing, and data architecture process. The study has been found that the overall proceedings of the data integration provides a key assistance to performing entire data warehousing, data extracting operation through organizing the entire sets of data from diverse sources within an unified structure. The entire data architecture of a certain business organization becomes more effective and easy to be used through the help of data integration process within performing the most effective data sorting operation. It most effectively helps a company to take most suited business strategies and decisions in the competitive business market area and helps to avail a desired business growth through analyzing the entire purchase making concerns, product choosing patterns of the customers with an efficient process. It also helps to evaluate the data about phenomenon about the consumer's feedback which enhance the performance of an enterprise in the worldwide market surroundings.

A huge number of business companies all around the world have started to access the assistance of the data integration within their entire business which mostly helps them to undertake the high satisfaction of the consumers through implementing suitable designing, manufacturing and marketing plan in the global periphery. The entire implication of the data mining, data sharing, data storing and analyzing operations can be improved through the overall support and use of data integration. The entire study has been found that the entire process of data sorting, data analyzing, data storing operation avail more effective and organized patterns through data integration. It enhances the scope to visualize and evaluate data output with a systematic process and provides the scope to implement data mining, data architecture, data extraction option more efficiently. The entire study has been found that a huge number of business companies throughout the globe have been shown their interest towards data integration in order to avail overall techniques considering data architecture, data mining, warehouse intelligent knowledge, data exchange through the help of data integration process.

## CONCLUSION

Data is one of the most valuable assets in modern day's business periphery. Most of the business companies all around the world have undertaken their steps forward to handle and analyse the entire data which mostly helps them to undertake most suited strategies in each operational area of a company especially in the trait of product designing and marketing area of a company. It most significantly helps to meet the demand and need of the consumers in the global market which helps to gain a higher satisfaction rate from the customers throughout the globe. Most of the leading organizations in business hierarchy have undertaken various data handling processes with the help of data architecture, data mining, intelligent warehousing, data extraction and sharing to ensure high business position in the worldwide business periphery. The entire operation and implementation of the data mining, data \sharing, extracting, warehousing operations and the process of building suitable data architecture can be fulfilled by an enterprise through the superior assistance of data integration process. The study has been concentrating on discussing how data integration helps to discover the techniques considering data architecture, data mining, warehouse intelligent knowledge, data exchange.

Various concepts which are mostly related with the entire process of data integration have been discussed in a detailed manner which mostly helps to evaluate the contribution of data integration on data architecture, data mining, warehouse intelligent knowledge, data exchange. It mostly helps to gain the insights of above mentioned techniques and their involvement with the data integration process. The entire study has been found that the entire data architecture, data mining, warehouse intelligent knowledge, data exchange operations performed by an enterprise in the international market have become more convenient and easy to be implemented through the assistance of data integration processes. Hence, it provides the scope towards an organization to gain a higher business growth and competitive advantage in global business market surroundings.

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