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ROLE OF BUSINESS INTELLIGENCE IN THE MODERN WORLD

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ABSTRACT

Now we are in the wide world of the web user driven reviews plays an important role for new consumers/individuals in shopping the products or taking up a new service and analyse the quality of the product/service. There are many e-commerce sites like Trip Advisor, Make My Trip, Trip Factory, Yelp, Zomato basically generate business through user driven online reviews. According to local consumer review survey conducted by Bright Local in the year 2015, 92% consumers read online reviews. 60% the consumers take up call in buying after reading 4-7 reviews. An efficient framework is needed to analyse the user driven content and generate the polarity of the review such as positive, negative and neutral. Hence this paper proposes Review Analysis Framework (RAF), which easily describes the polarity of the product/service for new individuals rather than going through numerous reviews. RAF based opinion mining is based on lexicon based approach. RAF consists of 3 stages: 1). Speech Recognition 2). Pre-processing and feature extraction 3). Polarity shift problems. Speech recognition is performed using Java API. The feature words are extracted using niosto tool and weightage is assigned using sentiwordnet 3.0. Experimental results are carried out using amazon product data datasets which are given to the system using human agent i.e., through speech. RAF performance analysis is performed on various domains like Books, Electronics, Beauty etc., and experimental results are identified and discussed.

Key words: Business intelligence, Modern world.

INTRODUCTION

Business intelligence can be described as "a set of techniques and tools for the acquisition and transformation of raw data into meaningful and useful information for business analysis purpose. BI technologies are capable of handling large amounts of structured and sometimes unstructured data to help identify, develop and otherwise create

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new strategic business opportunities. The goal of BI is to allow for the easy interpretation of these large volumes of data. Identifying new opportunities and implementing an effective strategy based on insights can provide businesses with a competitive market advantage and long-term stability. Business intelligence (BI) simplifies information discovery and analysis, making it possible for decision-makers at all levels of an organization to more easily access, understand, analyze, collaborate, and act on information, anytime and anywhere.

Dive on business intelligence

Business intelligence (BI) is a broad category of applications and technologies for gathering, storing, analyzing, and providing access of data to help enterprise users make better business decisions. BI applications include the activities of decision support systems, query and reporting, online analytical processing (OLAP), statistical analysis, forecasting, and data mining.

- Data extraction – extracts data from homogeneous or heterogeneous data sources
- Data transformation – transforms the data for storing it in the proper format or structure for the purposes of querying and analysis
- Data loading – loads it into the final target

ETL systems commonly integrate data from multiple applications, typically developed and supported by different vendors or hosted on separate computer hardware. The disparate systems containing the original data are frequently managed and operated by different employees. For example, a cost accounting system may combine data from payroll, sales, and purchasing.

ETL Architecture pattern

Most data-warehousing projects combine data from different source systems. The streaming of the extracted data source and loading on-the-fly to the destination database is another way of performing ETL when no intermediate data storage is required.

An intrinsic part of the extraction involves data validation to confirm whether the data pulled from the sources has the correct/expected values in a given domain.

Extract

The first part of an ETL process involves extracting the data from the source system(s).

In many cases this represents the most important aspect of ETL, since extracting data correctly sets the stage for the success of subsequent processes.

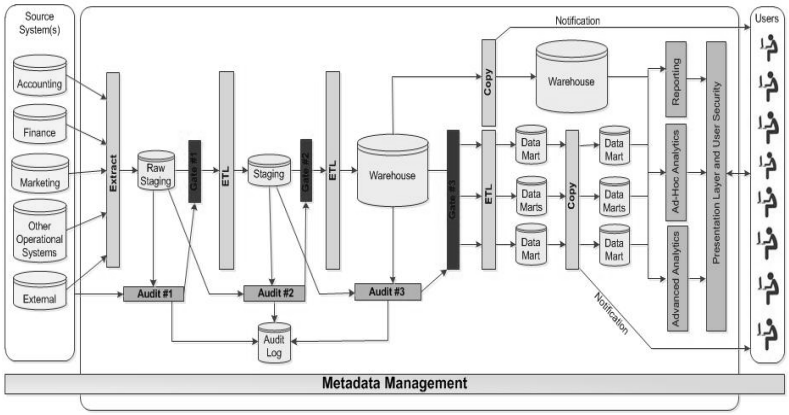

Fig. 1: ETL Architecture

Transform

In the data transformation stage, a series of rules or functions are applied to the extracted data in order to prepare it for loading into the end target. Some data does not require any transformation at all; such data is known as "direct move" or "pass through" data.

Load

The load phase loads the data into the end target that may be a simple delimited flat file or a data warehouse.

Who is BI for Business Intelligence information and applications available broadly to employees, consultants, customers, suppliers, and the public. The key to thriving in a competitive marketplace is staying ahead of the competition. Making sound business decisions based on accurate and current information takes more than intuition. Data analysis, reporting, and query tools can help business users wade through a sea of data to synthesize valuable information from it - today these tools collectively fall into a category called "Business Intelligence".

Key purpose of using BI

IT application like payroll processing, consider payroll has a key IT application for HR function. The core purpose of the IT application is to calculate the salary payable to all Employees generate pay slips and inform the bank for funds transfer to the respective

employee accounts. The same work can definitely be done manual but the manual system works well when the number of employees is small ans salary computation is simple.

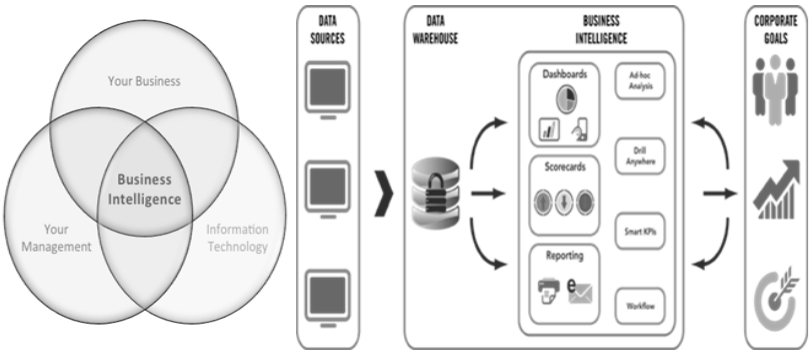

Fig. 2: Business intelligence

For eg. if there are 10,000 employees to pay and the salary calculation needs to take care of several data pieces like leave, over time, promotions, partial working and so on, and the entire work needs to be done very quickly? Needs to face many challenges there could be computational errors and wrong assumptions that would lead to delay and dis satisfaction. However when the salary calculation is automated, the benefits gained will be speed, accuracy, and the ability to repeat the process any number of times. These IT applications also help in fast information retrieval and generate statutory report. Such a type of application is termed as Department IT application. A payroll IT application generates computed data, and the volume of such data increases with every successive payroll run. This kind of historical data is very useful in business analytics. Some common IT applications like Train/Bus/airline ticket reservation systems. These are called online transaction processing. Online transaction also generate large volumes of data, typically stored in RDBMS.

OLTP systems support multiple concurrent transactions. Therefore the OLTP systems have support for concurrency control (locking) and recovery mechanisms (logging).

Managed Detailed measures of the software process and product quality are collected. Both the software process and products are quantitatively understood and controlled.

Optimizing Continuous process improvement is enabled by quantitative feedback from the process and from piloting innovative ideas and technologies.

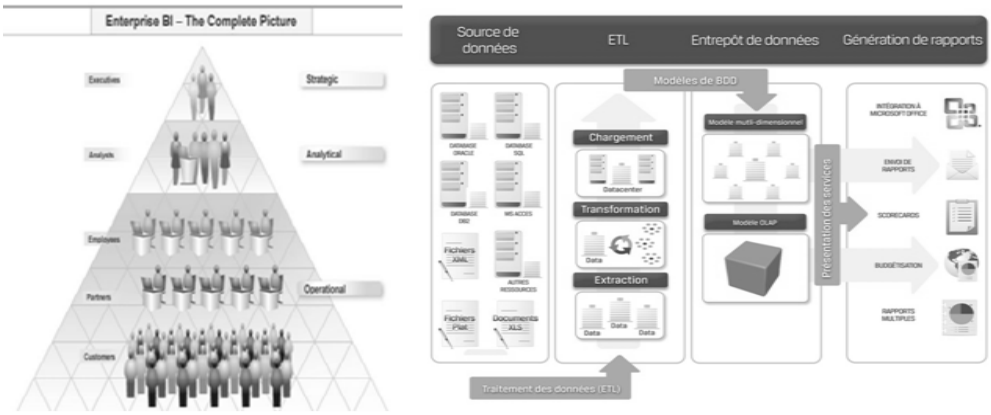

Fig. 3: ETL

CONCLUSION

Business Intelligence (BI) systems are used to improve an enterprise's decision making by combining tools for gathering, storing, accessing, and analyzing business data. While traditional features for querying, reporting, and analytics have long been the core focus of these tools, BI has evolved in recent years to become comprehensive, enterprise-wide platforms, and newer trends, such as self-service BI, have helped to continue interest in this technology.BI is a combination of the tools and systems involved in an enterprise's strategic planning that aid in its analysis. These solutions provide a single source through which to analyze a company's disparate data sources, permitting users to execute queries without the assistance of technical staff. Over the past several years, they have evolved from narrowly focused query and reporting tools to enterprise-wide platforms. The resulting single source offers not only current, but also historical and predictive views of operations. Sometimes referred to as decision-support software, BI applications analyze patterns in sales, trends, pricing, and customer behavior to assist in the business decision-making process. The expanded use of data warehouses, e-commerce tools, CRM packages, and other enterprise software has created a proportional need to easily view and use the information stored within these systems. The continued evolution of this software genre encompasses new trends, including self-service techniques, and ongoing acquisitions that represent a major market consolidation.

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