Chapter 1
To That of Artificial Intelligence, Passing Through Business Intelligence

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ABSTRACT

Business intelligence (BI) is no longer adequate to handle the day-to-day operations of any firm considering the ever-increasing volume of data and the resulting overload. As the amount of data grows, it becomes increasingly difficult to evaluate, making the introduction of a decision-making methodology that can be described as real-time BI, very taxing and cumbersome. Because of this, it is becoming increasingly difficult to implement effective decision-making at the enterprise level that was driven by BI, so that the company may remain robust and resilient to both man-made dangers and natural calamities. With today's sophisticated malware and the growing importance of the Internet of Things (IoT), we require a more sophisticated intelligence system, which we currently refer to as Artificial Intelligence (AI). We have a better chance of surviving a cyber-attack thanks to AI and its two other subsets, Machine Learning (ML) and Deep Learning (DL). These technologies strengthen our organization's day-to-day operations and help us make more reliable decisions as stakeholders.

INTRODUCTION

The current war against any cyber-attack has increased the need on information security professionals at all levels of any firm. Thus, it becomes increasingly important to analyse incoming data into sets of information (Easwaran et al., 2022). Additionally, the data will frequently be ambiguous and consist of quantitative in addition to qualitative aspects. Because of these factors, it is crucial to incorporate subjective judgement, human subjectivity, and imprecision to standard decision-making systems. The authors have used a new technology called a neural network to improve this decision-making process in a way that isn't typical for the infrastructure that will enable artificial intelligence systems to replace humans in order to meet the demand for real-time decision making.

When discussing businesses and their operations, the phrase "Business Intelligence" (BI) is used to describe the tools, methods, and strategies used to gather, organise, analyse, and display data about those entities. Improved business decisions are one of the main goals of implementing a Business Intelligence system. BI platforms are essentially Decision Support Systems that are data-driven (DSS). BI can refer to anything from a briefing book to a report and query tool to an administrative and Corporate Information Systems (Chen et al., 2022; Tavera Romero et al., 2021).

What is Business Intelligence (BI)

Data from a data warehouse and sometimes information obtained from operational systems, are the primary sources of information used by a business's BI system to generate reports on the company's history, as well as its current and its future. Elements of the software facilitate report generation, interactive "slice and dice" pivot table analysis, data visualisation, and statistical data mining. Business performance management is just one of the many uses for applications that treat expenses, income, and profits, and other types of data generated by businesses (Paradza & Daramola, 2021; Tavera Romero et al., 2021). The term "benchmarking" refers to the practise of collecting data on similar businesses that operate in the same field or create similar products for sale in the same market.

More and more businesses are realising the importance of integrating data and content management into their overall information management strategies. Enterprise information management is the merging of BI with enterprise content management. Organizations today are shifting their focus to Operational BI, a space which is both unchallenged and underserved by existing providers (Singh & Hiran, 2022). From vendors that have traditionally concentrated on the top of the pyramid, there has been a paradigm shift toward providing business intelligence to the base of the pyramid, with an emphasis on self-service business information. This transformation has taken place in the context of the pyramid. (Chaubey & Sahoo, 2021; Zohuri, 2020).

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