

**REVIEW ARTICLE****Use Artificial Intelligence to Reach Business Intelligence**

Subhash Desai

*Department of Computer Engineering, SAL Institute of Technology and Engineering Research, Ahmedabad, Gujarat, India*

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**ABSTRACT**

Concept of business intelligence emerged after having enterprise resource planning in place in manufacturing, service, and education sectors. Business with intelligence is to make profit either by large volume with thin margin or low volume with high margin providing quality products and services. Look at Reliance Industries Limited, many MNCs and national products offered by Patanjali. All are close to human touch and doing business differently using available virtual reality called artificial intelligent (AI). Even in education sector, people started offering integrated courses to keep students for many years' examples are MBA, MCA, and many more professional courses. AI is now catalyst for business processes. Attractive selling schemes and layout plan for assembly line floor have increased profitability and time savings. Annual service contract is another example. Discount for frequent air travelers is again contributed more passengers to travel resulting saving time to do more business. Let us try to understand how to make the use of AI in Indian business environment.

**Key words:** Artificial intelligence, business intelligence, enterprise resource planning

**INTRODUCTION**

An approach to find a machine who responds like a human being is known as artificial intelligent and abbreviated as AI. It is also considered as non-natural or mechanical mind. Robot works like human being. Whatever we are doing to make a machine sensitive similar to the behaviors of human beings, it will be considered as artificial intelligence. Wise people and experts have concluded the subject for some specifically, mannerly bounded criteria to make the robotics. They wish robotics be helpful to the people and not to disturb or destroy the people.<sup>[1]</sup>

**WHAT IS AI FOR RETAIL CONSUMERS?**

Online retail has been around for more than 20 years, artificial intelligence even longer. The combination of the two, coupled with current computing power and data growth, can offer today's retailers a personalization punch that lifts sales.

According to "The State of Retailing Online 2017," a survey of 74 retailers conducted by the National Retail Federation and Forrester Research, the median conversion rate for retailers in 2016 was 3%. There are some aspects of AI that must be addressed before an organization can fully embrace the results of artificial intelligence.

Many online sites feature static do personalized recommendations such as "*people who looked at this product actually purchased that product*" listings, or results that link to similar products or the top products in a given category. While recommendations can surface products that consumers may be interested in, they can also disrupt the shopping experience by forcing consumers to go through products of interest to others. Recommendations are very common.

More and more companies are including AI in their retail strategies to create dynamic, personalized experiences tailored to each customer. In an ideal world, this personalization is also invisible, so seamless that consumers do not even know it is there. This is not about hiding personalization but rather integrating it deep into the customer experience.

The end goal is to help people find what they want, suggest things they are likely to buy even if they

**Address for correspondence:**

Subhash Desai,

E-mail: [subhash1948@yahoo.com](mailto:subhash1948@yahoo.com)

do not know they want them, and up sell and cross sell. All of this must also be done with as little friction, confusion, extra steps, and wasted time on things customers do not want as possible.

How does AI change the online retail experience? The following are four examples:<sup>[2]</sup>

1. AI incorporates hundreds of signals to more accurately determine intent and context. AI can continually ingest and utilize hundreds of internal and external buying signals that have been positively correlated with. AI can also incorporate behavioral data about a shopper page visited, previous purchases, and spent time on the site, mouse movement, and context to explain the user's interests and intent.
2. AI can help develop fully personalized experiences. The personalized experience might include placement, size, and inclusion of everything from product selection which products are shown to the shopper to copy, images, and call to action buttons such as add to shopping cart.
3. AI provides opportunities for rapid learning for rapid change in addition to faster processing. AI also enables continual improvement, as machine learning learns from experience, automatically testing, and reusing the personalization and tactics most likely to lead to higher value sales, while dropping less successful tactics. These tests take place continually and are not limited to a human's ability to arrange and monitor tests.
4. AI for retail settings enables background personalization. As mentioned earlier, this personalization drives an experience that is so immersive that it feels like just part of the process, not an added layer to be waded through.

## **WHAT IS BI FOR BUSINESS ORGANIZATIONS?**

Business intelligence (BI) leverages software and services to transform data into actionable intelligence that informs an organization's strategic and tactical business decisions. BI tools access and analyze data sets and present analytical findings in reports, summaries, dashboards, graphs, charts, and maps to provide users with detailed intelligence about the state of the business.

BI is essential for business growth and competitive advantage, yet reaping benefits from BI require more than implementing the technology that

enables it. In fact, deploying the technology is the easiest part of any BI initiative, according to Boris Evelson, vice president and principal analyst at Forrester Research.<sup>[3]</sup>

Following are seven essential components of any successful BI strategy, according to several BI experts.

### **Give business ownership over BI**

Organizations that place BI in the hands of business users have greater success rates than those who confine BI within IT, Evelson says. The business must absolutely be in charge he adds.

The speed at which user's needs access to data and insights derived from BI has increased dramatically in recent years. Business users often need actionable information in real time and cannot wait for IT to generate reports.

### **Monitor BI use and adjust as necessary**

Although the business should own BI initiatives, IT must remain an active partner in monitoring and evaluating the use of BI systems. Monitor what they are doing, what data sources they are accessing, what tools they are using, and how they are using them, whether business unit A is using BI more than business unit B, etc., CEO can set thresholds in partnership with business units.

### **Validate, validate and validate**

Organizations may be tempted to quickly spin out lots of BI capabilities, but quality outweighs quantity, says Chris Hagans,<sup>[4]</sup> vice president of operations for WCI Consulting a consultancy focused on BI. It is better to have fewer things you trust than have a whole lot of things that are suspect he says.

Organizations need a strong validation process that focuses on enabling access to all the data needed to answer queries. It should also prevent problematic data from entering the BI system so that it does not produce faulty insights. In addition, the validation process should be agile enough to respond quickly to requests for new BI functions.

### **Focus on business problems first, then on data**

Do not take a build it and they will come approach to BI initiatives, Evelson warns. "What works

much better is a top-down approach, one that is about business outcomes. We don't start with 'Where's the data?' We start with solving a business problem," he says.

The organization should focus on delivering the capability to answer marketing's business question by first deciding what metrics need to be measured, accessing the data needed to calculate those metrics, and then enabling marketing to slice and dice the data.

"We need to identify a clear business problem first and what metrics we want to analyze, and then at the end of that we talk about where to get the data," Evelson says.

### **Prioritize - and build in processes for improvement**

A successful BI strategy anticipates both expansion and improvements, according to BI leaders. Organizations should know what business insights they want and which ones are most important so IT can deliver what's most critical to business users first and work its way through a priority list. Moreover, the BI program should be able to shift as the priorities change.

"It has to evolve with what the users and the people inside the business community need," Hagans says.<sup>[4]</sup>

### **Up skill "citizen" data scientists**

In its 2017 "magic quadrant for BI and analytics platforms" report, research firm Gartner says "the number of citizen data scientists will grow 5 times faster than the number of data scientists" over the next several years.

Cindi Howson,<sup>[5]</sup> a research vice president at Gartner, says executives already recognize that there are not enough data scientists to meet demand; they are also struggling to hire or identify in their existing ranks the citizen data scientists they will need.

### **Empower staff to tell stories with data**

On a similar note, Todd Nash, president and principal of CBIG consulting,<sup>[6]</sup> a professional services firm that helps clients leverage their data assets, says he has worked with organizations where workers understand how to use the insights

offered by their BI tools to tell stories that help others understand "what the data are trying to say." He says these people use the reporting and visualization functions built into BI technologies to develop narratives that help maximize the value of analytics.

This approach is not just about having people who produce slick looking reports; Nash says these users are able to make connections with the data that others might not see, thereby offering new insights that businesses can leverage for gains.

He says executives need to support and enable these workers as they explore those connections and present their insights. "There are just lots of different ways to challenge yourself," He says, "and part of that is challenging every KPI (key performance indicators) and making sure you're taking advantage of the information available to you to understand."

## **CASE STUDIES**

### **Dallas Zoo uses data to better care for elephants<sup>[7]</sup>**

Keeping detailed track of the behavior and location of the elephants in the five acre, Giants of the Savanna exhibit at the Dallas Zoo was no easy task. The zoo staff used a combination of video cameras and direct observation.

In 2013, the zoo introduced RFID powered elephant "ankle bracelets" that provided data on where each elephant was located and how far and fast each elephant traveled. The new data were useful, but managing it was still tricky. Much of the data were in spreadsheets, and the zoo's software could handle only 15 days' worth of data at a time. It was impossible to gain insights from long-term data such as behavioral changes as elephants aged. Integrating external data, including weather changes and the zoo's attendance fluctuations, were also difficult.

Then, in 2015, Microsoft solution provider helped the zoo enhance its RFID system with a Microsoft SQL Server 2016 based data warehouse hosted on Microsoft Azure. The data warehouse synchronizes the RFID daily data and links it to five other data sources, all of which, in turn, is made available to Power BI analysis and reporting services. Now, the zoo can collect and analyze data across multiple years, and kiosks at the exhibit can

show visitors the exact location of each elephant. “The RFID and Microsoft solution really have the potential to increase the quality of life and care we can provide to animals worldwide,” Scott says. “It’s also an incredible tool to help us tell the story of elephants in human care today.”

### **Reasonable robotics<sup>[1,8]</sup>**

The robotics is not a new matter in the world. We all are aware with it! It is dreamed by human beings to develop the best robot which may compete to the capacities of human and even animals. With such dreams a fear also aggressive that if the robot will be so sensitive and intelligent, it will definitely rule the human beings. Unfortunately, the machineries made us help for easiness in the work, but at the other end, it made us lazy or say less working animal.

Just a few years back, our grandparents and their parents were happy with their hard work. They have shaped the world for much number of years. However, the new generation of today is enjoying a rapidly progressive but competitive life. We the people have developed almost all the facilities which were support us to make our work without stress and force. It made us more convenient with the non-performable tasks too. There are some applications such as robotic hand to pick fruits and flowers and switches to automatically control water supply in farms.

It is already shown in a picture named “ROBOT.” Yes, there are so many other films, documentaries, movies, games, stories, and so many other literatures which demonstrate us for such the actions.<sup>[9]</sup>

The expert says that it is a way for human being to get destroyed by oneself. Because at present due to so many facilities most of the population is suffering the problems of headache, knee and joint pains, weak bones, less remembrance, less capacity of hard work, weaknesses of eyes, breathing, blood circulations, digestions, and so on. For any of the work, we are being dependent on the technological products and services. We, in fact, became dependent on the technologies only. We become helpless to remain fit, fearless, and perfect.

Forecast scientist Stephen Hawking which wakens up the wise people.<sup>[8]</sup>

During 1968, one screenplay writer has described an over intelligent computer named HAL 9000 in his screenplay of “2001 and a space odyssey” film. This computer was supposed to have sense

and innocent similar to the human beings. It was confirmed as a dangerous mechanism and so destroyed anyhow. Hence, many such the cases are already discussed, dramatically played or demonstrated by demonstrations, presentations, movies, and documentaries, but in overall, all of them the human found so more intelligent in compare to robots and robotics. However, suppose sometimes it cannot be possible what will happen for that the scientist Stephen Hawking said an interesting forecast which wakens up the wise people to survive the human future generation against such the unconditional conditions.

Some of interesting videos on YouTube:

Sophia in India

<https://youtu.be/fVAPHHqDrnC>

Honda’s Asimo

<https://youtu.be/QdQL11uWWcl>

MIT Cheetah Robot

[https://youtu.be/\\_luhn7TLfWU](https://youtu.be/_luhn7TLfWU).

### **CONCLUSION**

We must give due considerations when rolling out AI for retail. While AI-driven personalization has a lot of potential, some caution should also be taken.

### **AI requires flexibility**

For all aspects of the buyer experience to be customized, you will need a platform that enables that level of customization, such as flexible layouts that can vary by shopper, variable color schemes, and more. The retailer brand fades in this environment, becoming less about a uniform color and look and feel, and more about an experience that is highly tailored to the individual shopper.

### **AI in retail can lead to increased content demands**

More variables may mean increased content demands for different types of copy, category and product descriptions, promotions, product images, and more. At the same time, AI will come to generate more and more of that content directly.

### **Continuous adjustments are needed**

Obviously, the fast pace of change requires even more focus on reviewing results to ensure that goals are being met, as well as having the tools in

place for business people to continually make the required adjustments.

### **IT staff members may need to fine-tune their skills**

Although it may not seem that way at first, AI is not actually about ending employees' roles in online retailing. Rather, as AI takes on the repetitive data-crunching tasks, people will need to focus more and more on analytical and creative skills.

### **The future of BI**

Gartner sees the third wave of disruption on the horizon, where machine learning is baked into the software and will guide users on their queries into the data. It will be BI and analytics, and it will be smart. The combinations included in these software platforms will make each function more powerful individually and more valuable to the business people using them.

Software developers are making applications that will provide all functions within a single

application. Organizations cannot compete if they are not moving beyond only BI and adopting advanced analytics as well.

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