ARTIFICIAL INTELLIGENCE IN BUSINESS DEVELOPMENT PROCESS

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Abstract: Artificial Intelligence (AI) has moved from research and development into business organizations. Artificial Intelligence is driving digital transformation, growth and opportunity in nearly every business organization. The business organizations initiative explores the growing use of artificial intelligence in the business landscape. According to PwC, the "AI revolution" will result in a potential contribution of $15 trillion to the world economy by 2030.In human history where technological innovations are taking place at the rate of the blink of the eye. Robots working in industries, cars driving themselves, smart watches monitoring patient's health, and artificial intelligence (AI) playing games better than world champions are some of the technological innovations under artificial intelligence. The organization looks specifically at how AI is affecting the development and execution of strategy in business organizations. Artificial intelligence (AI) will soon impact nearly every industry in some way, but the technology is likely to make waves in one industry in particular human resources. Business organizations are finding ways to use artificial intelligence to save time and money and boost operational efficiency. Many organization and headlines such as jobless ratio, Demand Curve, management, performance, CRM Analytics, customer relationship management, sales, strategic planning, mass production, Purchasing Power Parity, GDP, inflation, money, Central Banks, Banking System, coaching, training, accounting, taxes etc. By 2025 Artificial intelligence will be used by at least 75% of organization of digital commerce.AI can contribute to an organizations software maintenance expense and often requires a dedicated support staff. A modern organization (enterprise, company,) should be viewed in terms of both its resources and its operation as a complex operational system integrating material, human, technological, organizational, and financial and information resources. This integration mainly involves the integration of management processes and implementation and functions/tasks, including the forecasting, planning, monitoring and evaluation of business organizations.

Keywords: Artificial Intelligence, CRM, GDP, Analytics, Intelligence, tasks.

I. INTRODUCTION

In the 2019 Accenture Technology Vision, 95 percent of executives said they'll be investing extensively in AI-related technologies over the next four years. However, developing advanced artificial intelligence systems requires a modified in mindset, as well as investments in key areas. How 5 organizations are using artificial intelligence to begin to move more quickly decision making, improve business processes, enhance user go somewhere at a fixed time, reduce costs and driver remarkable growth and profitability.

At MNC's, they're working with their clients to convert AI's promise into practice — a framework they call "applied AI." No matter what they need, their systems scale to meet that demand. This is applied AI to scale. Our people centered approach enables us to deliver customer experiences, more reliable products and smarter intelligent business operations. They are implementing digital solutions that have the major impact on people. And, it's no accident that these solutions have the biggest impact on businesses, as well.

A recent survey by McKinsey of above 2,000 business experts threw light on several key insights on how to transform business organization using AI. The heartening fact is that AI is not just for Fortune 1000 organizations. There are business opportunities in artificial intelligence for any size business organization and the need of artificial intelligence in all business sectors is very apparent.

Artificial Intelligence in Business organizations can optimize Your Ad Efforts if you are using Face book as a best example, the revenue says it all. Just in the last quarter of 2018, Face book showed revenue of $32 billion.

Business Applications of Artificial Neural Networks

Artificial Neural Networks has a multitude of real world applications in the business domain which have been classified as follows:

Finance
- ✓ Mortgage underwriting
- ✓ Foreign exchange rate forecasting
- ✓ Country risk rating
- ✓ Predicting stock initial public offerings
- ✓ Bankruptcy prediction
- ✓ Customer credit scoring
- ✓ Credit card approval and fraud detection
- ✓ Stock and commodity selection and trading
- ✓ Signature and bank note verification
- ✓ Forecasting economic turning points

- ✓ Bond rating and trading
- ✓ Loan approvals
- ✓ Economic and financial forecasting
- ✓ Risk management

Human resources
- ✓ Predicting employee's performance and behaviour
- ✓ Determining personnel resource requirements

Marketing
- ✓ Classification of consumer spending patterns
- ✓ New product analysis
- ✓ Identification of customer characteristics
- ✓ Sale forecasts
- ✓ Targeted marketing

Accounting
- ✓ Identifying tax fraud
- ✓ Enhancing auditing by finding irregularities

Artificial Intelligence Techniques Improve Business Organization Forecasts

Today's business organization is driven by customers. sadly, the patterns of demand vary considerably from period to period. The resolution of these two approaches is how forecasting error occurs and presents an opportunity for using AI methods. Technology based forecasts tend to focus on new product and new service development.

A form of artificial intelligence, neural networks provides significant process of economic forecasting. Neural networks have been used in various fields such as medicine and robotics for several years, recently AI made an impact as a serious business tool. Artificial intelligence (AI) techniques are being used to improve the accuracy of forecasts and support planning and decision-making processes.

Applications of Artificial Intelligence in Bankruptcy Prediction

Bankruptcy prediction has long been an important and widely studied topic. The main impact of such research is in bank lending. Banks need to predict the possibility of default of a potential counter-party before they extend a loan. This can lead to sounder lending decisions, and therefore result in significant savings [1]. The forecast of bankruptcies belong to classification problems. With input variables, generally financial and accounting data on a firm, we try to find out in which category the firm enters, bankrupt or not bankrupt[2,3]. The availability of a large amount of accounting and financial data on computerize databases, facilitates the use of artificial neural networks with quantitative data. They are tested as substitutes of traditional statistical tools such as multivariate discriminate analysis.

There are two main approaches to loan default/bankruptcy prediction.

The first approach, the structural approach, is based on modelling the underlying dynamics of interest rates and firm characteristics and deriving the default probability based on these dynamics. The second approach is the empirical or the statistical approach. Instead of modelling the relationship of default with the characteristics of a firm, this relationship is learned from the data. In early empirical approaches, Altman used the classical multivariate discriminate analysis technique with following financial ratios as input variables:

1) Working capital/total assets
2) Retained earnings/total assets
3) Earnings before interest and taxes/total assets
4) Market capitalization/total debt
5) Sales/total assets

Application of AI in Credit Card Fraud Detection

Fraud is increasing dramatically with the expansion of modern technology and the global superhighways of communication, resulting in the loss of billions of dollars worldwide each year. Although prevention technologies are the best way of reducing fraud, fraudsters are adaptive and, given time, will usually find ways to circumvent such measures. Methodologies for the detection of fraud are essential if we are to catch fraudsters once fraud prevention has failed. Statistics and machine learning provide effective technologies for fraud detection and have been applied successfully to detect activities such as credit card fraud. One of the most interesting fields of prediction is the fraud of credit lines, especially credit card payments. For the high data traffic of 400,000 transactions per day, a reduction of 2.5% of fraud triggers a saving of one million dollars per year. Credit card fraud may be perpetrated in various ways, including simple theft, application fraud, and counterfeit cards. Use of a stolen card is perhaps the most straightforward type of credit card fraud. In this case, the fraudster typically spends as much as possible in as short a space of time as possible, before the theft is detected and the card stopped, so that detecting the theft early can prevent large losses. Application fraud arises when individuals obtain new credit cards from issuing companies using false personal information [5].

Traditional credit scorecards are used to detect customers who are likely to default, and the reasons for this may include fraud. Such scorecards are based on the details given on the application forms, and perhaps also on other details, such as bureau information. Statistical models, which monitor behavior over time, can be used to detect cards, which have been obtained from a fraudulent application (e.g. a first time card holder who runs out and rapidly makes many purchases should arouse suspicion). Cardholder-not-present fraud occurs when the transaction is made remotely, so that only the card's details are needed, and a manual signature and card imprint are not required at the time of purchase. Such transactions include telephone sales and online transactions, and this type of fraud accounts for a high proportion of losses.

Applications of ANN in Stock Market Prediction

Financial Market all over the globe is different from other sectors like HR etc. We could model any financial market as a complex feedback mechanism working on both external stimulus as well as past results. Prices are unstable and have a tendency to fall and rise by any magnitude. Typical example includes share markets all over the world. Stock Market involves trade risk; swap risk, and greater amount of uncertainty. Here the role of accurate prediction is highly appreciated for it was possible to

predict it there would be no risk[6]. Neural networks have found ardent supporters among various avant-garde portfolio managers, investment banks and trading firms. Most of the major investment banks, such as Goldman Sachs and Morgan Stanley, have dedicated departments to the implementation of neural networks. Fidelity Investments has set up a mutual fund whose portfolio allocation is based solely on recommendations produced by an artificial neural network. The fact that major companies in the financial industry are investing resources in neural networks indicates that artificial neural networks may serve as an important method of forecasting.

Applications of ANN in Financial Auditing

Our study of ANN in the financial domain is how information technology developments affect the nature of the audit process and the audit skills. In this section we have reviewed several papers and articles and the review showed that the main application areas in auditing were material errors, management fraud, and support for backing concern decision. ANN's have also been find huge applications in control risk assessment, audit fee, and financial distress problems. Very many things in our business and auditing environment are changing at an increasing rate. Increased competition and the need for faster and better information for decisions mark today's business environment. In addition, systems are complex and many times on-line. This complexity means that auditors have more and different kinds of work to do than they had earlier. In case of Indian financial sector, in early 90's most of the work is done by pen and paper way i.e. is use of electronic means is pretty less. But now things are changed.

Typical Neural Network

Neurons are arranged in several layers called input, hidden, and output layers. The input layer is similar to a matrix of independent variables in a regression while the output layer is the dependent variable. The hidden layer is the series of relationships calculated in the network's training process. There will be one or two neuron receiving "signals" from each one of the neurons in the input layer. These signals are the input value of the independent variable, multiplied by a given weight. After receiving all the signals, neuron hidden layer sums them up. This weighted sum is its input. The output of this neuron (namely the signal that it submits to the output layer) is a nonlinear transformation of its input. This process takes place simultaneously in each neuron in the network. There are no interconnections among neurons of the same layer. Most neural networks have some sort of training rule whereby neural networks learn from examples and exhibit some structural capabilities for forecasting.

Neural networks program seeks to find a system of connective weighting among the layers that result in a minimum of error between the network's outcome and the actual answer. Each outcome generated by the network is compared to the actual figure at any point in time. If the network gives the "correct" answer no changes are made to the weights. If the network makes an incorrect prediction, the internal values of the neuron links are automatically adjusted via a training algorithm, it continues until the network learns to make the correct prediction.

Artificial Intelligence in Business Organization Recruitment Process

One of the biggest challenges today in human resource process is adapting the recruitment process to meet the demand and needs of Global academy .The mission is to bring through the latest breakthrough in automation with a focus of artificial intelligence to HR recruitment in order to meet this challenge. This mission will be achieved by realizing the opportunities and addressing the challenges presented by globalization with regard to HR recruitment. This breakthrough idea is creating new artificial intelligent software to streamline the recruitment process by freeing the managers, recruiters and employers from recruitment task.
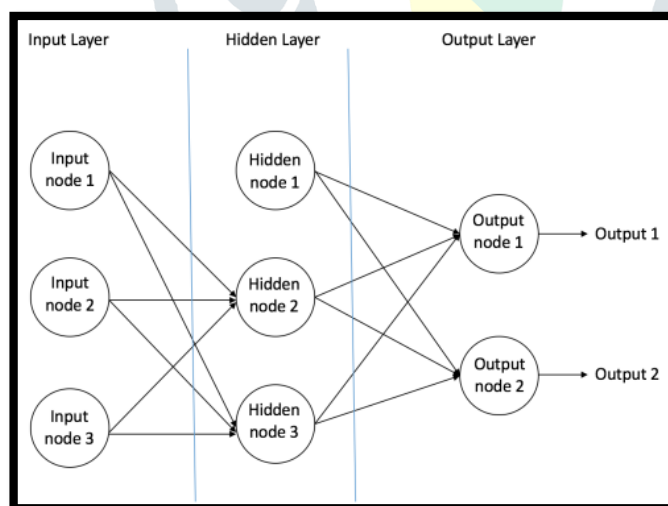

Figure1: Layers

Automated Application Processing

AI intelligently parses resumes to source this information and extract it into the format desired. A patented tagging technology that is over 90% accurate the most precise in the industry .Whether a resume has been submitted in Word, PDF, or one of over 100 formats, AI can analyses it. AI leading-edge Statistical Natural Language Processing (SNLP) technology extracts the full range of resume data into standardized, export-ready formats (including HR-XML). This means that resumes can be extracted into uniform formats for side-by-side review and effective presentation to hiring managers. AI resumes and job description parsing and matching is fully automated. No manual review or editing is required.

Odom and Sharda [4] Success of a business depends on market and business environment. Business Customer Relationship Management (BCRM) is developed to retain the existing customers as well as find new ones. The idea of customer

relationship through technology had evolved when web based buying and selling become possible. In this case companies store the information of customers like their preferences, needs, patterns of purchase and use this information to set product price, terms and tailor product to the choice of customers. The BCRM includes the total processes of building a relationship with customers and maintain it in a win-win environment.

The BCRM software includes the advancement of analyzing ability of the customers' information retained in the system. This may include customer order processing applications, apply artificial intelligence to develop preference database from inquiries, product tailoring by customers' demand, targeting by behaviors, and add new product features in responses to customers' demand and more depending on product and services of the organization. BCRM system eases the customers to find information of the product firmly. And eventually let the customer gets into the system to leave and find information to and from the system. Organizations who use the customer database are expert to design it in a way so that from the web, information can be warehoused.

The main features of typical BCRM software include:

A. Business Customers' data collection from any contact point of existing and prospective customers,[24]

i. Data analysis ability by implementing intelligence for managerial decision making,

ii. Sales automation technology that attract the customers by offering relevant benefits.

Oracle CRM, SAP CRM and Salesforce.com are some of the leading vendors of BCRM software. BCRM software saves money spends on marketing by retaining customers and find new ones by gathering information from all possible point of customer interactions.

Real-Time Business Marketing and Sales using Artificial Intelligence

Real-time technologies can be used in many aspects of marketing operations such as online marketing campaigns, online promotional programs, online advertising, and online surveys. New real-time target marketing strategies have emerged, including automatic personalized email responses and location-based marketing. Salespersons in the field can get up to-the-minute information about a customer before sales calls and can update the customer account in real-time. In B2B, manufacturers are sharing real-time information, product configurations, and order fulfillment systems with their sales channel partners Real-time monitoring of point-of-sales and inventory information across the supply chain is critical to an on-demand sales strategy where inventories can be replenished based on actual sales.

CONCLUSION:

The pervasiveness of the Internet has changed the dynamics of how businesses organization is conducted, from batch to real-time. Artificial Intelligence has great practical significance for managers dealing with forecasting, marketing, recruitment, sales, and customer service operations where real-time decisions are often required in cross-selling, up-selling, and providing quick and accurate responses to customers.

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