Embracing Artificial Intelligence for Sustainability in All Spheres of Business Management

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Abstract

Businesses around the world were being run in a very conventional methods till recent past. Managing Business in efficient and effective manner has become more and more challenging today due to changing environments especially in Post-Covid Scenario. The market is growing bigger and better and with conventional methods, it's getting difficult to manage the same efficiently hence there is urgent need to take help of technological advancements. Automation and digital transformation are offering handy tools to make decision making more strategic & effective, in accordance to Customer's Desires, Attitudes, Taste and Beliefs. To augment the digital experience, AI has proved to be a reliable tool to deliver specific and flexible decision making. Many Businesses look towards AI to extract the data & information pertaining to Manufacturing, Operations, Marketing, Revenue generation, Accounting apart from Human Resources and use it conveniently.

This study discusses in detail the ways, AI supports business houses to collect / act a detailed real-time customer / Stake holders' insight. Businesses will have to go miles ahead before they adopt this technology but many look for the critical benefits of integrating AI into Management practices including digital marketing for building an extra ordinary customer experience during their purchase decision making process.

This study / literature review also looks at AI-based digital Business / Marketing applications that can improve the Business Managers, the ability of decision making as per customer / Stake holders experience. The Study specially will highlight the number of challenges which will be faced while implementing AI for its Sustainability and also will recommend probable solutions that may be initiated by Policymakers in any organisation.

Ultimately, this study underlines the importance of AI in evaluating its Sustainability and also will provide invaluable vision to Managers to adopt Strategies based on AI to address the pressing Business needs, Environmental and Social challenges as well.

Keyword: Business Management, Digital Marketing, Artificial Intelligence, Consumer behaviour, AI Technology

INTRODUCTION

The Process of Planning, Organizing, Directing and controlling day-to-day activities of an organization achieving its aims, is better known as Business Management in a broad perspective. It's the process of acting upon all the aspects of a business may it be Finance, Operations, Marketing, Accounting or Human Resources. Business Managers need to exercise the skills of leadership, Communication downwards & Upwards, Problem solving and the Organisation's success shall depend solely on their skills to take strategic decisions.

To achieve the Organisation's objectives and to have effective communication both between top management and down the line employees in the Organisation, Various Management Practices and decision making tools are required.

In Recent Times, Artificial Intelligence [AI] has proved to be very handy & effective tool to address the large human base, available as Customer / Various Stake-holders in any Business. The use of AI impacts Business Management significantly. It also works as catalyst for Innovation and transformation, which ultimately leads to boost efficiency and effectiveness for Businesses. Artificial Intelligence is able to provide valued insights that will enable Business managers to take decisions based on real time data analysis. Business Houses are utilizing Artificial Intelligence to read the mind and analyse customer behaviour and preferences, which promptly allows them to customize their products and services accordingly. AI also boosts team productivity and enables more efficient allocation of resources.

RESEARCH METHOLOGY

A thorough analysis then was made for "selected literature" by use through thematic approach to Trend Identification, progressive opportunities available, simultaneously the possible Challenges related to the application of AI in driving its sustainability. This study included examples quoted from various Sectors like Healthcare, Manufacturing, and Service sector like Transportation & Supply Chain, Utility Sector, Retail & Marketing apart from Construction Sector, to underline the potential of AI to drive its Sustainability. The Methodology also included expert's consultations of AI and its Sustainability to gain deep wisdom into the latest innovations, developments and to put it into practice in best way. This study incorporates expert's opinions, their recommended methods and practical solutions that may be adopted by organizations and business Policy makers.

DISCUSSIONS

Artificial Intelligence And Management Practices

The use of AI also transforms the way Managers work and make decisions, leading to improved efficiency and strategic outcomes. AI helps Managers to predict market trends, Customer's preferences and concurrent trends, to analyse huge available real-time data and to optimize operational requirements accordingly. In accordance to a study conducted by Accenture, AI may increase productivity up to 40% through the automation of routine works.

The Impact of AI on management practices is particularly evident in data analysis. With the capacity to analyse huge data, AI algorithms can discover patterns with correlations that may be eluded by human analysis. This newly found capability empowers managers to make more wise decisions and also exactly concentrate the areas for improvements that can be implemented during operations. For Example, Marketers / Retailers can depend upon AI

Technology to understand their preferences through consumer's purchase history which will ultimately enable them to recommend customer's personalized choices.

Chatbots powered by AI, have also revolutionised various management practices. The virtual assistants are now handling customer's enquiries, responding immediately, and can perform few transactions. This also improves routine customer service and can spare certain human being who in turn can be utilized on other complex tasks.

The Growth Of Artificial Intelligence In Management Practices

The evolution of AI has seen noteworthy growth during recent times, particularly in areas such as Machine Learning and Natural Language Processing. The use of AI is having a transformative effect on organizations, enhancing their productivity & performance. Google's Deep-Mind, for Example, has been incorporated to optimize consumption of energy with in their Data centres, leading to a huge 40 Percent savings as far as energy cost is concerned.

As far as Supply Chain management front is concerned, AI has ability to optimize the entire process i.e. starting from visualising future demand to Inventory / store Management. Big Companies like Walmart and Amazon effectively use AI algorithms to analyse their Sales data and other external factors to precisely forecast future expected demands. This facilitates them to maintain optimum levels of Inventory, reduced wastages, and ultimately enhancing Customer satisfaction.

AI is making its footprints in the field of Finance Management also. AI powered Systems, facilitate auto-generated investment advices and services of portfolio management. These platforms analyse market Patterns and individual investor's choices to offer them personalized investment strategies. This not only provides wide open access to financial advice but also provides optimum beneficial solutions.

Methods Of AI's Best Utilization In Business Organisation

AI has various applications in Businesses. Few of these are listed in-detail below:

1. **Machine Learning**: ML algorithm enables computers to analyse large data-sets, Identifies various patterns and then makes predictions. This is widely used in detection of frauds, Sentimental Analysis, and future demand analysis purposes.

2. **Cyber Security:** Today, in fast advancing digital world, Cyber Security has become a matter of vital concern. Cyber threats are continuously growing in sophistication. AI has emerged as a powerful tool presently to detect and counter these Risks. Through advanced algorithms, AI can e-ffectively analyse network real time traffic. Anomalies can be Identified by AI and it can instantaneously respond to probable anticipated Security breaches.

3. **CRM:** CRM such as **Einstein AI for Salesforce**, utilise AI to record & analyse customer communications / interactions, preferences apart from their purchase history. The CRM analysis allows their personalized recommendations and enhances overall satisfaction to customers.

4. **Data Analysis:** A I has the capacity to analyse large data and to interpret the given valued information and also to make available the required insights. This is beneficial in sectors like Health-Care, wherein AI can help analysis of medical records, detect relevant patterns, and assist in process of accurate diagnostics.

5. **Digital Personal Assistants:** Virtual assistants namely **Siri, Alexa, and Google Assistant** make use of AI to interact and respond user's Enquiries, perform routine tasks, and offer the users some tailor-made specific useful suggestions. These Assistants are increasingly being deployed into various Applications and digital devices.

Advantages of Use of AI in Businesses

Implementation of AI into businesses have plenty of advantages. These include…

1. **Enhanced Productivity & Efficiency:** Implementing AI into any Organisation can have several benefits, including Productivity gains & efficiency. Organizations can reduce the costs associated with performing repetitive works which can be performed with Technology while maximizing the potential of their Human resources simultaneously.

2. **Dynamic Pricing**: Business Houses like **OLA, UBER Services** use AI for Variable Pricing, Adjusting Prices, Peak hours pricing, seasonal Pricing and Event Pricing as per gap between supply and demand. This allows the implementation of optimum pricing strategies and thus the increased revenues.

3. **Customized Recommendations**: **NETFLIX** recommends Movies or Series based movies according to viewing history of users through AI Algorithms. AI helps enhancing experience of users and improve customer engagement.

4. **Screening during Recruitment**: AI can shorten the recruitment process by screening CVs and shortlisting candidates based on Pre-defined eligibility standards. This is time saver of HR managers and improves the efficiency in routine hiring process.

5. **Improved Customer Service:** Chatbots powered by AI, are able to handle customer's primary queries by 24/7, provide swift response and optimum Solutions. This helps to improve overall customer satisfaction and reduces the work overloading on human support Staff.

6. **Enhanced Cyber Security**: AI is able to detect anomaly and probable Security threats, enabling business organisations to respond promptly. This assists in safeguarding vital data and protect organisation's systems against Cyber-Attacks.

7. **Improved Real-Time data Analytics:** Most Companies now-a-days analyse real-time data through AI, this empowers them to take decisions in time. AI facilitates flexible decision making and this improves capability to react to fast moving market conditions immediately.

8. **Predictive Improved Analytics**: It can analyse large historical data and predict future trends or patterns in business. It also helps business houses to take decisions pro-actively after identifying future opportunities & risks.

9. **Enhanced Monitoring of Business**: AI is able to capture and process large real-time data. Through AI, Organizations can be equipped with instantaneous monitoring abilities that can alert them in advance to upcoming issues, suggest suitable actions apart from even initiating responses in some cases.

10. **Less Human Error & Quality Improvement**: With new AI technologies implementation, Management can reduce recurring mistakes and also can adhere to established laid up standard norms. When AI and M L are jointly incorporated

with technologies like RPA that automates the works of repetitive nature with minimum human Intervention. This conjunction enhances Productivity and reduces inadvertent mistakes in the process.

Key Functional Areas That Can Influence Management

An organisation is run by various departments. The Success of a Business depends upon, how much smoothly and efficiently, these department run together. We will discuss in detail, how AI is helpful in synchronizing these departments for improving work processes…

- **HR Dept.:** Administration, Co-ordination and Controlling tasks consume most of manager's time in any organization. AI offers many solutions to HR processes, starting from On-boarding, shift management to Performance Appraisal of Employees.
- **Marketing / Sales Dept.:** Sales & marketing personnel can provide highly personalized customer experience by implementing AI into their processes. The cost of AI based Channel management is always lower than that of traditional high cost ones. To optimize a Product or Service launch/cost/Sale, in the future, Managers should use AI as a tool to know preferences of consumers.
- **Optimization of Finance and Operations dept.:** Finance dept. and operations dept. can be benefited by use of AI as repetitive processes which calls for involvement of huge Manpower and time, can be minimised with lesser time and Resource wastages.
- **Detection of fraud:** Detection of fraud is being relied upon conventional system most of the times and that has a number of short-comings and obviously it is less efficient. AI enables Business processes to be analysed and their threat scores are evaluated. These score are then compared to a pre-set standard limits. This comparison will determine whether the process is correct or fraud.
- **Risk Management:** Assessment of risk is very important but complex process during approval of loan to customers for Finance Institutions. Borrower's data can be analysed and scrutinised to simplify these processes through AI.
- **Management of Customer data**: Success in business depends upon how efficiently we manage customers / stakeholder's data. Managing

customer's data must be done very efficiently and accurately. **Natural Language Processing, Data Mining, and Text Analytics** must be utilized efficiently with proper accuracy to retrieve information from business documents.

Challenges In Implementation of AI

Despite of enormous benefits, implementing AI, Enterprises face certain challenges. Some of them are…

1. **High Implementation Cost**: Significant upfront Infrastructure, Software, and talent Investment costs are required to integrate AI technology. MSMEs might be needing some short of support to allocate funds & HR resources for AI Implementation.
2. **Dependency on Machines**: Heavy dependency on Machines may hamper the work and process in case of faults & failures. Organizations must ensure the availability of rationalised contingency plans to continue / maintain operations during down time.
3. **Shortage of Skill**: There is a huge demand for skilled AI professionals, data scientists with the required skills in AI integration. Organizations may need financial help for hiring, retaining and upbringing AI talent from within the organisations.
4. **Job Displacement**: Integrating AI technologies may have few loose ends towards job displacement as certain specialised repetitive tasks become routinely automated. Organizations must have scheduled plans and communicate to employees effectively in advance, to mitigate the fear of possible job losses and provide infrastructure for training to employees for smooth takeover of new responsibilities.
5. **Loss due to Technical Faults:** Dependency on Machines in continuous Production process / Workflow process may accrue losses owing to stopping of tasks due to prolonged technical faults.
6. **Training Requirements:** There shall be continuous training and upskilling requirements throughout Business fraternity. This may be brought-in through new engagements of skilled force from Technical Institutions and training requirements within the Organisation as well.

Job Creation Or Elimination Through AI

In a recent report, Gartner advices that new jobs shall be created and old process jobs shall be eliminated by A I. His estimates suggest that approx. 2.3 Million new jobs shall be created by end of 2020, On the other hand approx. 1.8 million jobs might be lost. This indicates the potential of AI to create turbulence in the job market. Some job roles might become obsolete as technology advances while new positions will emerge to implement and maintain upcoming AI systems.

Employers as well as Employees need to accept the challenges to be brought by AI hence adopt to the future job market. Life Long learning and a growth-oriented mind-set will be very crucial to sustainability of AI in future Economy.

Human Skills Which Artificial Intelligence Can Not Replace

As, AI continues to advance, the fear of Machines replacing human jobs enhances. However, there are certain essential skills which AI cannot replicate. It can't replace unique human attributes and abilities that are critical at work place. Following Skills cannot be replaced by AI.

1. **Emotional Intelligence:** Emotional Intelligence involves more than just processing information. It includes complexities of Social Interaction, understanding of complex emotional responses and making empathetic decisions that AI is not able to undertake.

2. **Critical thinking:** AI works excellent at data processing. It can analyse data faster than human being but it is not equipped to think critically. Critical thinking involves not only analysing information but also synthesizing in creative ways. These aspects of critical thinking are deeply rooted only in human experience and Intuition and not in Artificial Intelligence.

3. **Adaptability & Flexibility:** AI follows algorithms and patterns, making it less adaptable to unforeseen changes which do not follow predictable route. The Human ability to think, analyse and adapt creatively is something AI cannot replicate, particularly in various complex situations.

4. **Leadership & Social Influence:** Leadership is largely human rooted qualities such as Inspiration, motivation and personal influence which AL cannot authentically replicate.

5. **Creative Problem Solving (Artists & Doctors):** Original thoughts and creative problem solving are predominantly human qualities which cannot be read and interpreted by AI. AI relies on data reading, already fed in the system and cannot initiate it like human beings.

6. **Interpersonal Skills and Negotiations:** Interpersonal skills particularly Negotiation and Persuasions involve deep understanding and reaction to human emotions, behaviour and Intentions in real time. AI can simulate certain such factors but cannot replace these unique human qualities.

7. **Ethical Judgement & Complex Decision making (Judges Lawyers):** Decision making that involves ethics requires deep understanding of Socio-cultural and personal values that AI cannot fully comprehend or analyse hence cannot replace.

The Future of AI & Sustainability In Management

- **Recruitment:** AI may not be able to replace recruiting Managers role very soon, but it certainly can help to understand un-conscious bias during interview. This way **AI might truely change the job pattern of managers by 2030**.

- **Automation of routine works to save Human time:** Certain works can be performed by AI, relatively with more efficiency and accuracy, than that of human being. Human Resource will still be required for certain works, but AI technology certainly will free human being's precious time for other specialised works.

- **AI and Human Being's togetherness:** AI alone may lead to short-term gains for enterprises that will rely on it for more automated process and thus removing employees but cannot sustain itself independently in long run. This is because AI lacks creativity. In the long run, Enhanced Intelligence can be achieved by Enterprises only through joint efforts of human resource and AI. The intelligence of Machine and deep learning will provide human Intelligence with action packed information. Human being cannot be supplemented by technology but shall be enhanced by it.

- **New job creation by AI:** In accordance to World Economic Forum, Approx.12 million additional jobs will be created by implementation of new A I technologies by 2025. Data-analysts, Scientists, AI & ML specialists, apart from Digital Marketing Strategists shall be in high demand.

Looking forward, the tremendous sustainable future of AI awaits to be used in Business Management. Increasing trends in AI based automation, Predictive Analytics, and customised experiences shall continue to boost transformation of Businesses. As use of AI continues to progress, it's potential to drive business successfully will only and only improve.

It is anticipated to observe continued advancements in NLP, Picture Recognition and Robotics, which certainly will enable AI to have further impact across Industrial world. Additionally, ethical considerations around AI, such as Transparency, accountability with fairness will play an enhanced role to its sustained adoption and firm implementation.

CONCLUSIONS

In true sense, AI can play a pivotal role in promoting its sustainability in all spheres of Business management. By analysing Data and optimizing processes, AI can prove to be an important tool in Waste management and enhance Efficiency in Production & Distribution processes. It can also promote its Sustainability through personalised services that promote Eco-friendly practices. In addition, AI can be instrumental in preventing risks to one's health and infrastructure by helping identification of probable risks and predicting future events. On the top of it, AI can play a pivotal role in the field of Sales & Marketing to boost the revenues of any Business Organisation hence its Sustainability.

As AI continues to grow, it possesses the huge potential to bring about significant positive impact in promoting Sustainability and countering the Environmental and Social challenges that we face today. However, it's of utmost importance to recognize that AI should be applied with caution and ethical Intelligence to ensure that it is used in a responsible and sustainable manner. While several challenges exist in implementing AI for Sustainability, practical and rational Solutions must be adopted to overcome these Challenges.

However, the successful implementation of AI requires a multi-faceted and holistic approach to Sustainability.

Business Organizations and their Policy makers can overcome these challenges and unlock a more Sustainable future by utilizing huge potential of Artificial Intelligence. By continuous collaboration and sincere Innovation worldwide, AI can play a transformative role in promoting and advancing towards Sustainable Developmental Goals of United Nations Policy.

In conclusion, by embracing Strategic tool like AI will effectively drive Innovation, Efficiency and success of business in this era of digitalisation. Technology driven Business Processes are the need of the hour which got to be strengthened to take Business Management and the Organisation on the path of growth with Artificial Intelligence.

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