IMPACT OF AI AND MACHINE LEARNING ON BUSINESS STRATEGY

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ABSTRACT:

Technological advancements lead to the growth of various sectors of the economy. It is very essential for the social and economic growth of the country. The growth of a nation or a country is mostly dependent on the business practices in the society. In this modern world technological innovations leads to a rapid change in the society. Business sector also depends on these technologies for sustaining in the field and also for building their business profile. Artificial Intelligence (AI) and Machine Learning (ML) are the current technological practices which brings numerous changes in the society. In the context of the business these technologies play a crucial role for developing and expanding the businesses. This enables the business to access more contacts in the business system. It can be used for framing the suitable business strategies for the business. Business strategies are the plans which needs to be made for the smooth functioning of the business and to be competitive in the market. In this modernized world most of the businesses are depending on the AI and Machine Learning for making their business strategies as they believe that it is a secure vault for conducting their business activities and operations. It increases the efficiency of business. However there are certain drawbacks and flaws in these technological advancements. These technical practices may also lead to the loss of the business and also it may not be useful for all strategies. There are certain business strategies which cannot be undertaken with the help of AI or Machine Learning. In such cases the business needs to adopt the suitable technologies which would be accurate for the business in conducting all the operations and tackling all the difficulties.

KEYWORDS: Artificial Intelligence (AI), Machine Learning, technological advancements, business strategies, technological innovations, business strategies.

INTRODUCTION:

Business sectors had been expanded due to the social, economic and political factors in the society. It also states that the rise of the business had also being influenced by the technological inventions. Most of them are trying to expand their business globally and wants to increase their customers and personalize themselves. It cannot be made with the help of the Technology. AI and Machine Learning Technology is more prevalently used for the expansion of business. It does not mean that domestic business is not attaining profit. They are also being able to attain the profit but not similar to a global business. The global businesses need certain resources and the skills which can be made with the help of technology. Most of the large-scale businesses have access to global contacts which leads to the introduction of new markets.

Supply chain which are served to be link for transporting the goods for the business as they are the primary source of business. These supply chains can be optimized with the

help of AI and Machine Learning. Logistics and warehouses can be used for storing the raw materials and products of the business as if it is not stored it may provide a huge loss to the business. These places are situated in different and multiple areas with lot of complexities and barriers such as tariffs, inventory costs etc which can be identified with the help of AI and Machine Learning. It can be used for finding out the secure places for the products in the business.

The AI and Machine Learning technology can be used for building your business profile and helps to increase the interactions with your customers. It helps you to gain more contacts and customers who are considered to be the God of Business. The interaction to the customers with the help of these technologies enables the customers to know more information about the business. It can also help the businessman to acquire the knowledge about the customer preferences and to develop suitable strategies in such a way for satisfying the needs and wants of the business. It helps in impacting the brand reputation of the business.

Innovative ideas and techniques are considered to be dominant for the business as it helps the businesses to increase more profit and also leads to the great workflow of the marketing and sales of the business. This can be done by a definite process in a preplanned way. This process can be done fully only with the help of technology. Without the technology innovative ideas cannot be existed and also marketing and sales will not be improved. AI and Machine learning techniques can be adopted for performing these strategies as they have the ability to bring new types of innovations and inventions.

It cannot be said that the business is entirely benefitted through the above-mentioned technologies (AI and ML). It is pertaining to note that there are also certain barriers in these technologies which can turn the business upside down. The data which is stored with the help of AI or Machine Learning can be mirrored by scam persons which leads to a damage to your reputation. This is considered to be the major drawback of AI and ML. Even though it leads to development of business, there is still existing many frauds and scams in the business. It involves more amount of investment which cannot be afforded or made by the small or medium sized business The changes in the preferences of the consumers depends on the customers and it is not depending on these technologies. It does not have the capacity to handle all the legal and regulatory challenges that are dealt in various international markets.

Statement of the Problem:

1. This research tells how the AI and Machine Learning influence the decision-making processes in business strategy formulation.
2. This research impacts the use of AI and Machine Learning in impacting the business strategy.
3. This research discusses whether the AI and Machine Learning helps to contribute innovation and business models
4. This research discusses whether the marketing and sales can be improved with the help of AI and Machine Learning.
5. This research discusses the barriers involved in AI and Machine Learning on business strategy

Review of Literature:

1. JR Machireddy in his research had discussed that Machine Learning into a data-driven strategies has emerged as a pivotal factor for organizational success and competitive advantage. This paper delineates a comprehensive framework for leveraging AI and ML to enhance business analytics and improve decision making. This research provided an idea that how AI and ML can be used for fostering the organizational growth of the business.

2. Nitin Liladhar Rane in his study had analysed how Artificial Intelligence (AI), machine learning (ML), and deep learning (DL) impact the development and improvement of business strategies. It examines how AI changes business models, highlighting its ability to stimulate innovation, improve procedural effectiveness, and enhance decision-making abilities. This article states that however there are many obstacles and challenges in these technologies, business can used them effectively for maintaining a competitive advantage in the ever-changing market.

3. Irshadullah Asim Mohammed in his research had discussed about the advent of Artificial Intelligence (AI) and Machine Learning (ML) has significantly transformed strategic decision-making processes with business operations. This paper explores the profound impact of these technologies on optimizing operational efficiency, enhancing decision accuracy, and fostering innovation. This research study had stated the need for robust governance frameworks and regulatory standards to address the ethical and operational risks posed by AL and ML.

4. Mohammad Ariful Islam in his research had provided a systematic review that examined the transformative role of these technologies in reshaping the business strategies across various industries. This study had identified key application of AI, ML and DL in marketing, supply chain management, financial analytics, and human resource management, showcasing their ability to address complex business challenges. This study provides a comprehensive understanding of how AL,ML and DL are shaping modern business strategies, offering valuable directions for future research and practical application.

Methdology:

1. This research comprises of both doctrinal and non-doctrinal research.

2. Both Primary and Secondary data in this research has been collected in the form of questions and surveys from students and IT professionals who have the knowledge about these technologies and the business persons regarding how the AI and ML strategies plays a crucial role in impacting the business strategies.

PRIMARY DATA:

The data was collected through questionnaire and respondents were send link with few questions a data among 83 samples were collected. The collected data was analysed in the form of Pie-chart representation and was used for representing the opinions of the respondents.

SECONDARY DATA:

The data was collected from journals, articles, newspapers, internet, books and the history of business changes in the world.
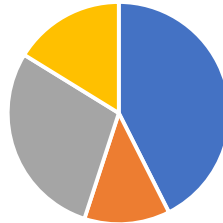
STUDY AREA:

The respondents are not specifically chosen they are from different fields and age groups who has the knowledge and were aware about the trade wars and the geopolitical instability of the business.

Hypothesis:

1. What is the use of AI and ML in impacting the business strategy?

2. Which type of business can be benefitted with the help of AI and Machine Learning?

3. What are the barriers that are involved in the use of AI and ML on business strategy?

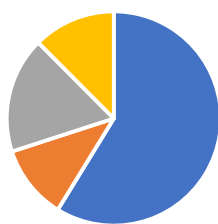**Results and Discussion:**

Use of ML on business strategy

- Enhancing personalization and customer experience
- Data-driven decision making
- Increasing competitveness in the market
- Optimization of Supply Chain

Machine learning can significantly impact business strategy by enabling data-driven decision-making, automation of tasks and improves the various aspects of operations from customer experience to supply chain management. It helps the businesses to gain insights predict trends and to optimize the processes for greater efficiency and profitability. It can be used to categorize customers based on their behavior and demographics enabling the business to tailor their marketing and sales efforts for greater effectiveness. It can improve the efficiency and automate the inventory levels improves the logistics leading to faster delivery times. It provides 24/7 support to the customers and improves the customer satisfaction. It predicts the needs and personalize the interactions with the customers.

Use of AI on business strategy

- Enhancing personalization and customer experience
- Data-driven decision making
- Increasing competitiveness in the market
- Optimization of Supply Chain

AI enhances the business strategy by enabling predictive analytics, optimizing operations, and improves the decision-making. It analyzes data to forecast future trends, allowing the businesses to adapt their strategies proactively. AI helps to identify patterns and trends and provides insights that helps in decision-making. AI can help to identify potential risks and opportunities by analyzing the historical data and predicting future scenarios. AI can analyze customer data to predict the preferences that helps in enhancing customer engagement and satisfaction. It helps to personalize the website content and

recommendations based on the individual user behavior and improves the customer journey.
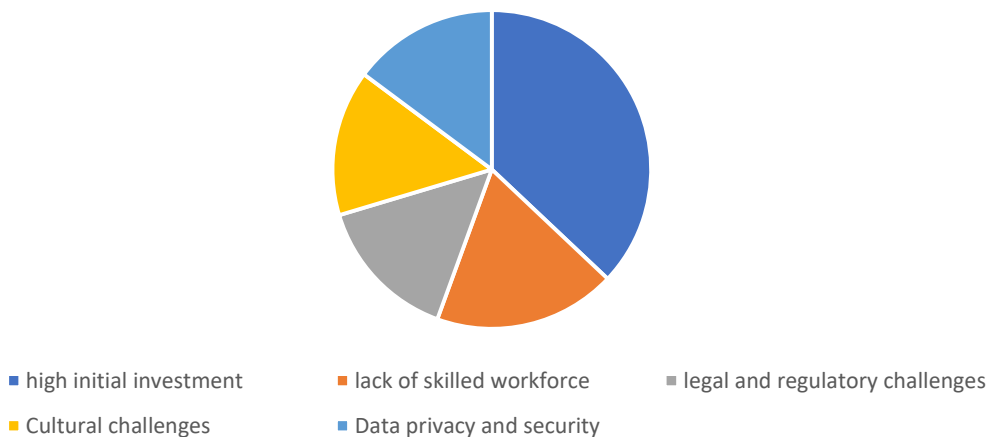
Busniesses that are benefitted with the help of AI and ML

■ Domestic ■ International ■ Both
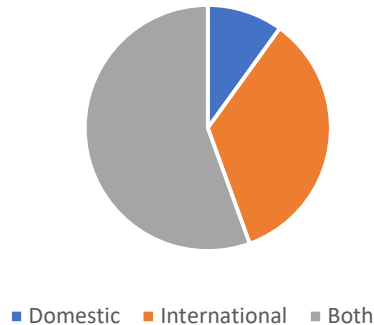
AI and Machine learning offer significant benefits to both domestic and international businesses that helps in increasing the efficiency and access to global markets. AI and ML helps in automation of the repetitive tasks optimization of the processes and improves the efficiency and productivity of the business. It helps to develop new products and services. It can be used to navigate complex regulations that are involved in the international business and it helps to ensure compliance with international trade laws. It can be used to identify suspicious activities and prevent fraudulent transactions.

Barriers of AI and Machine Learning on business strategy

■ high initial investment ■ lack of skilled workforce ■ legal and regulatory challenges
■ Cultural challenges ■ Data privacy and security

There are several factors which are to be considered as the barriers of the AI and Machine Learning on business strategy. It includes high initial investment, lack of skilled workforce, legal and regulatory challenges, cultural challenges and data privacy and security. The most significant hurdle is the shortage of skilled professionals with the necessary expertise in AI and machine learning.

The initial investment in AI and machine learning can be substantial, hardware, software, training data and these includes additional ongoing costs for maintenance and data management. There is a lot of concerns among the persons who are using the strategy of AI and ML regarding data security and privacy. In this part of research it has been dealt among the five major barriers of international business the most important and significant barrier is it involves high initial investment and operational costs for these technologies.

Suggestions:

1. The Business should implement data validation techniques and to adopt advanced data management practices like anonymization and differential privacy.
2. They should develop and adhere to stringent AI and ML ethics and policies and also should comply with the relevant laws and regulations related to AI and ML.
3. The employees should be educated about AI benefits and potential and should be transparent about AI implementation and address employee concerns.
4. The businesses should evaluate infrastructure readiness for AI deployments and explore managed AI services to reduce complexity.
5. The business should be aware of the emerging legal issues related to AI and ML and should clarify data ownership issues related to AI generated content

Conclusion:

The AI and ML technologies can impact both domestic and international business and it can be used for gaining market access and to facilitate their operations in the global markets. This is the most important benefit that can be acquired by all the businesses with the help of these technologies. The major uses of the AI and ML is helping in the predictive analytics and decision making, increasing the operational efficiency, enhancing the customer experience and having a competitive advantage, strategic planning. By involving the use of AI and ML businesses can improve more informed and effective strategies, improve operational efficiency, enhance customer experience and gain a competitive edge in the market.

The future business operations and organizations are mostly dependent on the AI and ML as it helps to identify the future business patterns and trends so that business can be able to adapt certain strategies according to that. It leads to more effective marketing campaigns, product development and allocation of resources. It helps to identify the risks involved in the business in predicting the future scenarios. It identify patterns that are indicative of fraudulent activity helping the businesses to protect their financial resources. By the leverage of AI and ML businesses can identify and act on emerging signals such as shifts in customer behavior. It can help to identify unconventional ideas and growth opportunities by analyzing vast datasets. It can be used to monitor the execution of strategic plans, track progress and suggest adjustments as needed.

There are certain barriers in the AI and Machine Technology which happens due to cultural challenges, legal and regulatory challenges, high investment etc. These are the most common problems that are being prevailing in these digital technologies. Due to these problems and the barriers most of the business suffers a lot of difficulties and they are not able to achieve the goals and objectives of their business. Some businesses have inadequate computing infrastructure and outdated systems and also they have insufficient technical support which prevents them from using the technology of AI and Ml. Investment in the necessary infrastructure is crucial for successful AI adoption. The AI and ML fails to prevent the customer data and lot of misuse of personal information had been taken place due to improper maintenance of those technologies. There is no proper skilled workforce to use the AI and ML technologies in a proper way. So these barriers and problems can be overcome by proper adoption of skilled labors who has the knowledge of AI and Ml. Then they can develop and build certain strategies in such a way to adapt to the changes that takes place in the world in both aspects cultural and regulatory.

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