A MODULAR ANALYSIS OF AI IN BUILDING BUSINESS

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ABSTRACT:

AI has established encapsulating everything from rule-based machine learning to image classification whose applications ranges from preventing high-end cyber security threats to visual perception. Computing redefines Business Processes across geolocation. Machine Learning and Artificial Intelligence have reached users on every platform like be it online or offline. Business Intelligence and artificial intelligence are very crucial and yet often misunderstood tools in an enterprise context. Today's AI technology can automate the analysis of complicated datasets and provides ready to use reports. AI can support various important business needs like automation of processes, through analysis of data we can gain insights and engaging with customers as well as employees.

KEYWORDS: Artificial intelligence, Business, Computing, Machine Learning, Analysis.

I.   INTRODUCTION

The irrevocable workflow changes has seen by human resource management with the assistance of AI and Machine Learning.[2] AI-based business process management helps to induce accurate insights into customer's behaviour and supported these inputs the long-term consumption trends can be chalked out easily. The upgradation and advancement in AI has introduced sophisticated machine learning algorithms such as KNN (K- Nearest Neighbours), neural networks and decision trees. These algorithms help CEOs, managers, business owners to resolve problems which they may face describing properties for specific datasets. Sales and revenue system are main pillars of the business. Top-tier sales representatives will make sure the organisation keeps on growing and reaching new boundaries credit to computing.[3] AI is currently mostly associated with either innovative research areas or heavily funded projects, this research paper aims especially at companies wondering whether it is actually possible to make use of Al even when you're neither Google, Microsoft, Facebook, etc. nor a brand-new tech start-up. It is meant to provide some guidance on how to start, how to find use cases and what risks to avoid.[1] It is profitable for the companies to appear at AI through lens of business capabilities instead of technologies. Broadly, now a days AI can support three important business needs i.e. automating processes, gaining insights and fascinating with customers and employees.
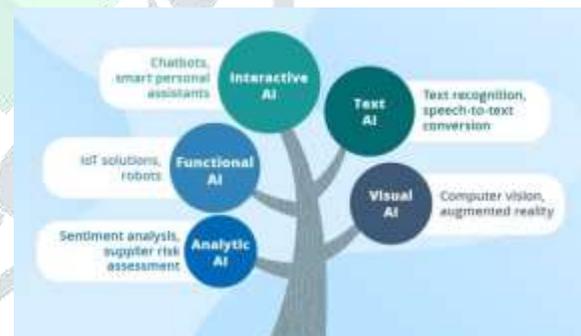

Fig 1. Different Branches of AI

In figure no.1, we can see that there many different branches in AI which can be useful in building an business.

II. PROBLEM DEFINITION:

A. Statement of Problem:

Managing huge amount of data between databases and servers. Delaying in making decisions. To find errors or problems and suggesting best solution to overcome it. Having clear prescriptions for how the data should be used in decision making. Recording customer's experience. Manufacturing quality assurance.[6] To get an overall performance report of the companies, avoiding delays and human errors while generating report.

B. Existing Systems:

In sales and marketing in business we can analysis and manage data using AI.[6] It helps you analysis the given data and give you an proper conclusion at faster rate to make an decision. The AI helps you in understand your customers better, what are they expecting better and understand the experience of the customers which will directly influence on sales and big sales. Most promising things in AI is manufacturing which will help through defects or errors in products, productivity and increase in efficiency of products and improves the supply chain.

III. LITERATURE SURVEY

SR. NO.	PAPER TITLE	AUTHOR	YEAR	ADVANTAGES	DRAWBACKS
1	**Impact of Artificial Intelligence on Business [3]**	**Neha Sonia, Enakshi Khular Sharma, Narotam Singh, Amita Kapoor**	2018	The growth rate of AI is properly shown. Ease to recognize the work of an AI in businesses who have implemented AI in past. The analysis is properly shown about the industries generating profit and expanding their business by adapting new technologies.	Mostly focused on graphs and analysis but not shown the actual implementation part.
2	**Artificial Intelligence in Business: From Research and Innovation to Market Deployment [4]**	**Neha Sonia, Enakshi Khular Sharma, Narotam Singh, Amita Kapoor**	2019	Recognition of the factors which are proved in today's AI exponential growth. Identification of the achievements in AI which are keep on advancing the commercially available intelligent products. Listing of the top AI industries and investment trends in AI.	Lacking with use of the AI algorithms to setup a business. Detailed Implementation of AI is required.
3	**How artificial intelligence will change the future of marketing [5]**	**Thomas Davenport, Abhijit Guha, Dhruv Grewal, Timna Bressgott**	2019	There are various Marketing Strategies given which we can implement in different industries. The various algorithms are suggested for various industries.	The marketing strategies discussed are costly for small businesses for integrating AI. Lacking with proper explanation and example to give justification of chosen algorithms.
4	**Artificial Intelligence used in Schools of china [7]**	**Krupaben Panchal, Bilal Shaikh**	2020	The AI headband technology is very useful for teachers to track student's performance and their thought process throughout their academics. Students will also get accurate teachings and get their	The AI can't deal with the mental and emotional state of the students. It will not be pocket friendly for each and every family to afford such education. Some students

				queries solved properly and in a understandable manner. Teachers will get accurate report on student's concentration and attention.	can be interested in entertaining kind of classes so for them AI can be boring at some point.

IV. PROPOSED MODEL

Business sector is an complex entity. The main connections required in Business while implementing AI are external elements which includes things like customers, partners and competitors. Internal elements includes things like vision, strategy, decisions, plans, risk and measures.[3] Operational elements includes software applications, departments, processes, data, money, people, resources, products, computing hardware, supply chain and time. Also intangible things like brand, marketing and culture. So, in 10-15yrs AI will be pervasive. A simple way to think about business competitive position is to make a note of some aspects i.e. Intimacy of customers, Operational Excellence, Supremacy of Marketing and Product Leadership.[4] Today many companies have competitive position, so instead randomly introducing AI into business we must do introduce it strategically which will help us to boost that competitive advantage even more.

The below figure no.2, shows that how companies around the world are using Artificial Intelligence in to their businesses,[5]

Fig. 2 AI activities in different fields

Here are some places where we can integrate AI in to our businesses, are as follows

1) Add artificial intelligence to your call centre or customer care centre to handle most of the routine traffic and leave the really complex queries from customers to be handled by

humans, they are better at adapting and creating problem solving at this point of time.[5]

2) Add artificial intelligence to automatically approve any applications for example loans, since machines are good at considering multiple dimensions of data and historical data to approve or deny loans, historical bias such as approving a higher percentage of loans for men than woman has to be removed from the data to perform well.[8]

3) We can add artificial intelligence to predict consumer buying patterns using pattern recognition algorithm based on many factors like medium weather location income so that the stores scan stop there are shelves optimally an cause don't increase an we don't leave profit on the table either a large percentage of machine learning deployments don't live up to expectations.[9]

Steps to implement AI in Business:

Step 1: Get information and data.

In this step you're just starting out with understanding AI at high level, get a couple of engineers to learn about the discipline figure out what business problems AI can help solve set up an AI environment, you don't have to buy any special hardware or software you can consume what cloud providers such as Amazon, Google and Microsoft offer. Build a prototype of a minimum viable product and test it with a small set of customers to refine data to get experience with what data you need and how to collect it. Showcase the business value and share the possibilities with your business leaders.

Step 2: Actual implementation

In this you will begin formalizing things a little bit more. AI will replace some jobs but create many as well people will start getting anxious so prepare them for change, change drivers are many changing customer needs, new and nimbler competitors, rapid technology, change process efficiencies, system

modernization and so on. Use your successful prototypes to experiment with other business problems, model current processes to understand where AI fits. Understand employee roles that will change and how customer experiences can become remarkable and be the advocate for change. AI is one technology though the most powerful, understand other technologies like block chain, virtual reality, cloud computing, IOT, big data and others.
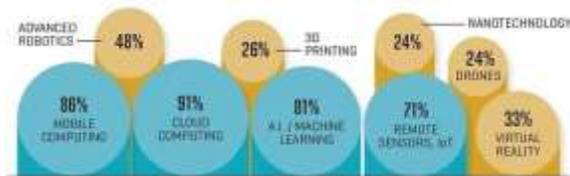

Fig 3. Technologies considered important for setup an AI environment.

In above figure, there are technologies which we must take care of during implementation. Frame AI with a return on investment and make it integral to the decision making, formalize your data if it's spread across multiple business areas and are in silos develop a strategy to logically consolidate them. Seek the help of partners on this journey if you need to.

Step 3: Enabling AI in Business

Enable AI which will become part of your business, clarify your business goals and strategies. AI may cause you to change strategic direction, understand the role of your business in the larger ecosystem of competition and collaboration, though AI is very powerful it'll likely be only one component of a slew of other technologies for business solutions, so build strong integration capabilities, make education foundational to your business your people will have to continue to learn. Setup mechanisms for learning adaptation and action on a continuous basis change will be an integral part of your business do it better than your competitors, focus on creating remarkable customer experiences formulating the right business strategies developing and reskilling your employees modernizing your business processes and maturing critical capabilities.

V. FIELD SURVEY

I had visited some companies who uses AI in to their businesses to make the business smooth and accurate leading to better performance. The companies are as follows,

1) The company name is VPhrase having the product called Phrazor, interviewing their senior I get to know that their product is used to provide analysis and insights in simple understandable language. It's technology that writes a story from data in human languages uses words and visuals to provide context, reveal hidden insights and propose necessary actions. With the meaningful insights it can make preferable decisions from company's analytical data. It nullifies the human errors and provide reports on time.[6]

2) Another one is Arya.ai which is a autonomous Ai operating platform for financial services, having the product called Compliance and Risk Monitoring. So their products main aim is monitoring the risks and frauds which uses deep learning to discern anomalies and patterns of the past data to flag suspicious risks. It scans risk triggers, monitors information and provides timely actionable alerts enabling risk management and mitigation. It is very useful for the companies who want to what risks they to take to increase their business.[10]

VI. CONCLUSION

Your business depends on the stage you are in, you have to gradually increase your maturity and with increasing business value. So every enterprises will have a different focus and goals. So we can't just jump on to the AI bandwagon without knowing what we want to the accomplish at first place. Otherwise we will end up doing AI stuff randomly.

VII. ACKNOWLEDGEMENT

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