

AN IMPACT OF AI TO THE INDUSTRIES IN THE NEXT 10 YEARS

Prof. Farook Ahmed Shaikh

Assistant Professor, KLE Society's J G College of Commerce, Vidyanagar, Hubballi.

I. INTRODUCTION

Artificial Intelligence (AI) is now a major influence in contemporary industry, beyond the realm of science fiction. AI is helping businesses all around the world gain a competitive edge by improving operational efficiency, decision-making, and customer experience personalization. With specific examples and useful insights, this blog series will examine how AI is changing several business divisions and verticals.

Index Terms- Role of AI in Modern Business impact the workforce, affect different industries, etc.

The Role of AI in Modern Business: By incorporating cutting-edge technologies like computer vision, machine learning, and natural language processing into routine business activities, AI is radically altering how companies function. These technological advancements enable companies to:

Boost Operational Efficiency: By enabling quicker and more precise procedures, automate repetitive tasks, save operating expenses, and boost productivity.

Make Better Decisions: Forecast trends, streamline supply chains, and make data-driven decisions that support corporate objectives by utilizing predictive analytics.

Customize Customer Experiences: Use AI to examine consumer information and behavior to provide tailored customer service, recommendations, and marketing.

Encourage Innovation: By employing AI to evaluate data, spot market opportunities, and expedite research and development, you may encourage the creation of new goods, services, and business models.

II. HOW AI WILL AFFECT DIFFERENT INDUSTRIES

HEALTHCARE: Impact of AI anticipated: High

One of the sectors most affected by the new technology is healthcare. AI is propelling advances in pharmaceuticals and significantly raising the standard of treatment.

Computer vision capabilities are among the most useful uses of AI in healthcare. AI algorithms can examine medical pictures, including MRIs, CT scans, X-rays, and mammograms, to identify cancers and cancerous growths earlier and more accurately than human doctors, potentially saving lives. Additionally, because AI is more adept than humans at managing vast volumes of data, AI systems may create highly customized treatment plans by analyzing a patient's genetic information, medical history, and lifestyle data.

FINANCE: Impact of AI anticipated: High

the data-rich field of finance is a perfect fit for artificial intelligence. AI can successfully detect and stop fraud and evaluate risk because of its capacity to analyze vast volumes of data and discover trends. At the same time, banking and finance professionals may provide their clients with more individualized financial advice and product recommendations because to AI's greater capacity to process customer data and behavior.

RETAIL: Impact of AI anticipated: High

Retail is one of the businesses using AI that is expected to impact customers very instantly. Both physical retail establishments and e-commerce are seeing interesting advancements thanks to artificial intelligence. Advanced AI algorithms can help retailers offer highly personalized product recommendations and specialized shopping experiences based on customer data and behavior. AI-

powered computer vision systems can streamline checkout, enhance inventory control, and support loss prevention initiatives in physical retail establishments.

On the supply chain side, AI can analyze shopper buying patterns and alert retailers when the top seller stock is low. AI-powered platforms can also deliver insights into the temporal patterns of customer demand, helping retailers understand which customers want what products, and where and when they want them.

MANUFACTURING: Impact of AI anticipated: High

The Fourth Industrial Revolution, sometimes referred to as Industry 4.0 or 4IR, is a new age in the digitization of the manufacturing sector, and AI developments are essential to its development. Traditional factories are being transformed by autonomous systems and collaborative robots that operate alongside people. AI-powered maintenance systems in these "smart factories" are able to predict possible malfunctions by analyzing sensor data from machinery. In the meantime, real-time defect and anomaly detection is possible through the processing of camera and sensor data by machine learning algorithms.

LOGISTIC: Impact of AI anticipated: High

The logistics sector is expected to experience significant, hitherto unseen efficiencies as a result of AI's explosive growth. Because it can optimize supply chain management, enabling real-time tracking and predictive analytics, the technology has been gaining acceptance in the industry. Because AI may employ complex algorithms to examine delivery locations, traffic patterns, and fuel consumption, it can also aid in route optimization.

AI is a contentious topic in the transportation sector as automakers compete to develop self-driving technology. There are several instances of artificial intelligence (AI) in the transportation industry, ranging from machine learning (ML)-powered autonomous vehicles to industrial robots that construct automobiles.

ENERGY & UTILITIES: Impact of AI anticipated: High

AI has the potential to change how we generate,

distribute, and use energy. AI-powered technology can enhance energy output projections by analyzing vast datasets, including weather and energy use trends. Through dynamic pricing models, this can improve grid stability, decrease unscheduled downtime, and save consumers' energy expenses.

As more businesses recognize the promise of using AI in their sector, there is also a chance that the processing power of AI will put a burden on grids, depending on industry trends. Today, maintaining servers is a risk to grids.

EDUCATION: Impact of AI anticipated: medium-high

The education sector is on the verge of a technological revolution in which artificial intelligence (AI) will not only automate procedures but also enhance the impact and personalization of instruction. Although educators may be initially wary about students using AI to write papers, figuring out how to incorporate AI's capabilities into teaching strategies could result in a far more individualized educational experience for American schools.

AI-powered platforms enable highly customized training by modifying content to match each student's unique needs. AI can also automate administrative duties like classroom management and grading, giving teachers more time to concentrate on engaging and innovative instruction.

AGRICULTURE: AI impact predicted: medium-to-high

It might seem improbable that agriculture, one of the oldest occupations in the world, will embrace AI. However, AI systems could simplify processes and remove a lot of the difficulties that come with conventional farming. AI-powered solutions give farmers up-to-date information on crop health, soil conditions, and insect activity, enabling them to make informed decisions about pesticide, fertilizer, and irrigation applications. Additionally, AI can assist agricultural experts with resource optimization, weather forecasting, and environmental monitoring.

ENTERTAINMENT: Impact of AI anticipated: medium-high

Although AI-generated media is still in its infancy, it is already obvious that the technology will revolutionize the entertainment sector. By automating

processes like video editing and special effects creation, generative AI can streamline production operations. AI-driven tools have the potential to enhance distribution strategies by analyzing audience data, helping creators tailor content for specific demographics.

Personalization is a major facet of AI's impact on the entertainment industry. Music and streaming recommendation systems can deliver ultra-tailored user experiences by suggesting content based on preferences.

LEGAL SERVICES: Impact of AI anticipated: Medium

ChatGPT-4 famously aced the Uniform Bar Exam (UBE), scoring in the 90th percentile, above the average score of actual bar exam students. Generative AI can assist legal professionals by cutting down on time spent on repetitive, routine tasks because of its shown capacity to understand and evaluate legal information at a high level. Lawyers may concentrate on strategic casework and higher-level decision-making by using AI tools to automate repetitive chores like legal research, contract analysis, and document inspection.

TOURISM & HOSPITALITY: Impact of AI anticipated: medium-high

The hospitality and tourism industry is experiencing a wave of innovation thanks to AI. The new technology is fundamentally reinventing the sector, changing how hospitality businesses interact with guests, optimizing customer experiences, and streamlining operations. AI can customize recommendations for travelers, suggesting destinations, activities, and amenities. The tech can also enhance operational efficiency by streamlining tasks like booking, check-in, and customer support.

GOVERNMENT: Impact of AI anticipated by the government: medium-high

AI is already being used by governments all around the world to increase productivity, decision-making, and public participation. Repetitive operations like handling tax reminders and processing payments can be automated with AI-driven solutions.

AI has the ability to analyze enormous volumes of data in political processes to improve policymaking,

engage voters on a big scale, and create political messaging. Additionally, from completing tax forms to applying for benefits, the technology can assist residents in navigating complex government systems.

REAL ESTATE DEVELOPMENT: Impact of AI anticipated: medium-high

From land acquisition and design to construction management and property marketing, artificial intelligence (AI) has the potential to completely transform the real estate sector. Real estate agents can get useful insights for market research, automate property valuations, and choose the best sites with the use of AI tools. Furthermore, enormous volumes of data may be analyzed by AI-powered algorithms to forecast market trends and spot investment opportunities.

III. HOW TO GET YOUR COMPANY READY FOR AI

- 1. Establish goals:** Start by determining problems or chances where AI can be useful. Pose queries such as: What issues do we need to resolve? Which metrics are we able to enhance? Which procedures might be made more efficient? Having specific goals makes it easier to match AI activities with your overarching aims, whether those goals are boosting marketing campaigns, streamlining supply chains, or increasing customer service
- 2. Perform an audit of the data:** AI is fueled by high-quality data. Verify the accuracy, accessibility, and organization of your data by conducting an audit of your present infrastructure. Make sure you examine data governance policies, storage options, and data sources for this stage.
- 3. Train your employees:** Your staff will be more equipped to support and carry out AI efforts if they are better informed. Use workshops, training sessions, and opportunities for ongoing learning to teach your staff the basics of artificial intelligence.
- 4. Start small:** With new innovations dropping seemingly every day, you may be tempted to go all in on AI. However, starting small is a more sustainable strategy. Test the waters with pilot projects. Use these trial runs to demonstrate value, learn from experiences, and refine strategies.

5. **Establish an experimental culture:** To realize the potential of AI, you need to build a safe space to experiment with AI and empower employees to participate. Encourage innovation by creating an environment where your team can explore, innovate, and fail without fear of retribution.
6. **Choose the right development partner:** The final step of preparing your business for an AI-powered future is also one of the most important. AI is complex, requiring a development team with expertise in things like neural networks, computer vision, and predictive analytics. The right AI development partner will help you innovate and scale your AI architecture, but the wrong one could burn through resources without delivering results.

IV. CONCLUSION

It is yet unknown what AI's full potential will be, including the breadth of its quickly developing skills and how they will be integrated into particular industries. One thing is certain: AI will forever change the way we work as systems become more sophisticated and businesses adopt these technologies to stay competitive, industries will distinguish themselves by how quickly they adapt.