### ARTIFICIAL INTELLIGENCE: A BENEFICIAL TOOL FOR COMMERCE AND INDUSTRY

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#### Abstract

Artificial Intelligence (AI) is no longer a technology of the future – it is already a part of our daily life and business world. From online shopping suggestions to smart chatbots and automatic machines in factories, AI is helping commerce and industry to grow faster and work smarter. This paper explains in simple language how AI is becoming a powerful tool for businesses. It covers how AI works in different sectors, what are its advantages, limitations, and future possibilities.

#### Introduction

India is moving fast towards digitalisation. With Digital India, UPI payments, online shopping, and Industry 4.0, the role of AI has increased. Artificial Intelligence can be define as a machines that can "think" and "learn" like humans. Despite of just following fixed instructions, AI systems can analyse and interpret data, discover patterns, and take smart decisions.

In commerce (business, trade, finance, and marketing) and in industry (manufacturing, logistics, production), AI is saving time, reducing costs, and giving better customer experience. For example:

- Commerce: Flipkart and Amazon use AI to suggest products to customers. Banks use AI to detect fraud.
- Industry: Tata Steel and Reliance Industries are using AI for production efficiency and predictive maintenance.

### **Objectives**

- 1. To explain in simple terms how AI helps business and industry.
- 2. To show the main areas where AI is used in commerce and industry.
- 3. To highlight the benefits and challenges of AI.
- 4. To suggest how India can use AI for inclusive economic growth.

# Scope of the Study

This paper covers: Applications of AI in commerce (marketing, finance, e-commerce, and banking) as well as applications of AI in industry (manufacturing, logistics, supply chain, quality control). This research paper identifying the advantages, challenges, and looking forward of AI in the Indian context.

# AI in Commerce (Business World):

Artificial Intelligence has transformed the way businesses interact with customers, sell products, and manage transactions. In the Indian context, AI is playing a vital role in e-commerce, banking, retail, and marketing. Below are the main areas where AI is being used in commerce:

# 1. Customer Support:

Earlier, customers had to call helplines and wait in long queues to get answers to simple queries. Now, AI-powered chatbots and virtual assistants provide 24x7 support.

- For example, Paytm uses AI chatbots to help customers with payment issues, refunds, and KYC problems.
- Swiggy and Zomato also use chatbots to handle delivery complaints, track orders, or answer FAQs.
- These chatbots can handle thousands of queries at the same time, something human agents cannot do.
- If AI found the question is complex, then the chatbot transfers the case to a human support agent.

This makes customer service faster, cheaper, and more convenient for both businesses and customers.

### 2. E-commerce Recommendations:

When you open Amazon or Flipkart, you will notice that the site shows you "Recommended for You" or "Customers who bought this also bought."

- This is powered by AI recommendation engines.
- The system studies your browsing history, search terms, items in your cart, and even your past purchases.
- Using this data, AI predicts what you are most likely to buy next.
- For example, if you buy a smartphone, the system may suggest covers, earphones, or power banks.

This not only improves sales for companies but also helps customers discover useful products easily.

### 3. Fraud Detection:

Nowadays fraud in banking and online payments is a major concern in India. With the rise of UPI payments, internet banking, and credit cards, banks are using AI to detect suspicious activity.

- State Bank of India (SBI) and other leading national and credit co-operative banks are using AI to monitor transactions in real time.
- For example, if someone tries to withdraw a large amount from your account in a different city or country, AI can flag it as unusual and alert the bank.
- AI also identifies patterns like repeated small transactions or sudden high-value purchases which may indicate fraud.

This protects both customers and banks from financial loss and builds trust in digital commerce.

### 4. Digital Marketing:

Marketing has shifted from traditional TV or newspaper advertisements to highly targeted digital advertising. AI plays a big role here:

- Companies use AI tools to analyse data from Google searches, Facebook, Instagram, and YouTube.
- Based on user interests, age, location, and online behaviour pattern, AI decides which advertisement to show and suit users.
- For example, if you search for "best running shoes" on Google, you may see ads from Nike or Puma on your Instagram feed within minutes.
- AI also helps in email marketing, where personalized offers are sent to each customer based on purchase history.

This ensures businesses reach the right customer with the right product at the right time, increasing chances of sales.

# 5. Stock Market Analysis:

Investing in the stock market involves analysing a large amount of data, such as share prices, company performance, and global trends. AI helps investors and financial institutions by:

- Studying big data from markets, news, and social media.
- Predicting possible rise or fall of stock prices using past patterns.
- Offering robotic-advisory services that suggest where to invest.
- In India, platforms like Zerodha and Upstox are beginning to integrate AI tools are providing better services to the investors.
- Investment is crucial decision for the big investment houses and firms also use AI to execute high-frequency trades within fractions of a second.

This eradicate human error of users and helps in making smarter and data-driven investment decisions.

AI in commerce makes businesses more efficient, customer-friendly, and secure. From chatbots to fraud detection, recommendation engines to digital marketing, and even stock predictions, AI is reshaping the way Indians shop, bank, and invest.

# AI in Industry and Commerce:

# 1. Manufacturing Automation

Artificial Intelligence-driven robots are widely used in modern manufacturing plants, such as those of Maruti Suzuki and Tata Motors. These robots perform repetitive and precision-based tasks like welding, assembling, and painting with greater accuracy and efficiency than human labour. This results in faster production and reduced operational costs.

### 2. Predictive Maintenance:

AI systems continuously monitor machines through sensors and data analytics. By detecting patterns of wear and tear, they can predict potential breakdowns before they occur. This approach reduces downtime, prevents unexpected failures, and increases the overall life span of industrial machinery.

# 3. Quality Control:

In industries such as electronics and automotive, AI-powered cameras and image recognition systems inspect products on assembly lines. These systems can identify even minute defects that may be overlooked by human inspectors, ensuring higher product quality and minimizing wastage.

# 4. Supply Chain Management:

Companies like Reliance Retail utilize AI to optimize inventory management, streamline logistics, and enable faster delivery to customers. AI algorithms analyze demand patterns, forecast stock requirements, and ensure products are available at the right place and time, reducing delays and excess inventory costs.

# 5. Energy Efficiency:

Industries which needed high electricity consumption, such as cement and steel are using AI to optimize energy consumption. AI systems adjust power usage based on real-time demand and production levels, helping reduce energy wastage, lower costs, and contribute to sustainable industrial practices.

# Advantages of AI in Commerce and Industry

#### 1. Saves Time

AI can process information and complete tasks much faster than humans. In business, this means quicker decision-making, faster customer service, and speedy handling of large amounts of data. For example, chatbots reply instantly to customer queries, and AI software can generate reports in seconds.

#### 2. Reduces Cost

By automating routine jobs, AI reduces the need for manual labour and helps companies avoid wastage of resources. Machines and algorithms work more efficiently, leading to higher productivity at a lower cost. For instance, e-commerce warehouses use AI-powered robots to manage inventory and packing, which cuts down expenses.

#### 3. Better Customer Service

Nowadays, AI make sure customer support available 24x7 via chatbots and virtual assistants. It also AI provided personalised recommendations and offers based on individual shopping habits to users. This action leads to customer satisfaction and helps businesses build long-term relationships.

### 4. High Accuracy

Unlike humans, machines do not get tired or distracted. AI systems can analyse large data sets and perform tasks with a very low chance of error. In fields like banking, healthcare, and stock market analysis, this accuracy is extremely important.

# 5. Encourages Innovation

AI opens the door for new ideas, smart products, and advanced services. For example, self-driving vehicles, AI-powered shopping apps, and smart home devices are results of AI-driven innovation. Businesses can design better products and provide unique customer experiences.

In short, AI helps industries and commerce by making work faster, cheaper, more accurate, customer-friendly, and innovative.

# Challenges of AI

#### 1. Job Loss Concerns

The rise of automation and AI-driven machines has created fear of job displacement, especially in sectors like manufacturing, customer support, and logistics. Many traditional roles may be reduced or replaced, leading to unemployment if workers are not reskilled.

### 2. High Implementation Cost

Deploying AI systems requires significant investment in hardware, software, and infrastructure. For small and medium enterprises (SMEs), the cost of adoption becomes a major barrier, making AI integration less accessible.

# 3. Data Privacy and Security Risks

Since, AI relies heavily on large quantity of data, so there is always a risk of misuse, hacking, or unauthorized access to personal and sensitive information of the users in the dark web. This raises serious concerns about user privacy and trust issues.

#### 4. Shortage of Skilled Workforce

India and many other countries face a lack of AItrained professionals. Without adequate skills in areas such as data science, machine learning, and AI system management, it becomes difficult for industries to adopt and implement AI effectively.

# 1. Over-Reliance on Technology

Excessive dependence on AI can create vulnerabilities. If an AI system fails, makes errors, or is attacked, it can disrupt operations on a large scale. Balancing human judgment with AI decisions is essential to reduce risks.

#### Conclusion

Artificial Intelligence is a double-edged sword. If used properly, it can make Indian commerce and industry highly competitive at the global level. Instead of fearing job losses, India must focus on reskilling workers for new AI-based jobs. With the government's push for "Digital India" and "Make in India," AI can be the backbone of future growth. New technological evolution like Artificial Intelligence having both a challenge and an opportunity. If users applied wisely, it can make Indian commerce and industry stronger and more competitive on the global platform. Instead of worrying about job losses, India should focus on reskilling people for the new roles AI will create. With the support of programs like Digital India and Make in India, AI has the potential to become the backbone of the country's future progress and prosperity as well as Information Technology (IT) sector.

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