

## Place of Artificial Intelligence in Financial Sector

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### Abstract :

Artificial Intelligence (AI) is a field of study that uses technology to enable computers to perform complex tasks. Artificial Intelligence (AI) is a major innovation in technology includes Machine Learning (ML) and algorithm language. It is popular not only in one field but many such as Finance, E-Commerce, Agriculture, Automobile, Social Media, Health Care, Gaming, Robotics, Surveillance, Space Exploration and Entertainment etc. Our study focuses on the uses of Artificial Intelligence in the field of financial sectors with a brief introduction. The study explains benefits and percentages of Artificial Intelligence in Financial Sectors. The study also explains future of Artificial Intelligence in Financial Sectors Services.

### Key Words :

Artificial Intelligence, Machine Learning, Algorithm Language, E-Commerce.

### Introduction :

In India's Financial Sector, Artificial Intelligence plays a significant role in enhancing customer service, managing risk, detecting fraud, automating processes and providing personalized financial advice by analysing large data sets to identify trends and patterns, with applications in areas like credit scoring, investment strategies and compliance checks, making a key driver for innovation and efficiency within the industry; particularly in areas like digital banking Financial Technology (Fintech) and insurance.

### Definition :

“Artificial Intelligence is making machine behave in ways that would be called intelligent if a human were so behaving.” This term was coined in 1955 by Stanford Professor John McCarthy. John McCarthy is known as the “father of Artificial Intelligence (AI).”

### How Artificial Intelligence works :

#### 1) Machine Learning :

A method that trains computers to learn from data without explicit programming for every situation.

#### 2) Deep Learning :

A type of Machine Learning that uses artificial neural networks to learn from data.

#### 3) Natural Language Processing :

A method that uses machine learning to teach computers to understand human language.

#### 4) Computer Vision :

A method that uses machine learning to teach computers to derive information from visual inputs.

### Objectives :

- 1) To study the uses of Artificial Intelligence in the field of financial sectors with a brief introduction.
- 2) To study the percentages of Artificial Intelligence in financial sectors.
- 3) To study the benefits of Artificial Intelligence in financial sectors.

4) To study the future of Artificial Intelligence in financial sectors.

**Scope :**

The study covers the area of Artificial Intelligence in Financial Sectors like Banking Industries, Investment Companies, Insurance Companies etc.

**Methodology :**

The study is based on secondary data and descriptive. The data collected from Various Journals, Articles, Reports, News Papers and Monthly Current Affairs.

**Limitations :**

Our study is only based on Artificial Intelligence in the field of Financial Sector, there are many more applications of Artificial Intelligence such as E-Commerce, Agriculture, Automobile, Social Media, Healthcare, Gaming, Robotics, Surveillance, Space Exploration and Entertainment on which further study can be done.

**Meaning of Financial Sector :**

The Financial Sector is the part of an economy that includes the business and institutions that manage money and provide financial services. It includes Banking, Insurance, Stock Markets and Investment.

Financial sector helps to business grow and people buy homes, protects individuals, companies and their assets, provides saving schemes and other ways to save, provides many job opportunities and helps move capital and liquidity through markets.

**Uses of Artificial Intelligence in Financial Sector :**

**1) Algorithmic Trading :**

Artificial Intelligence for the develop trading algorithms that can analyse market trends and historical data to make decisions and execute trades faster than humans.

**2) Automation and Efficiency :**

Artificial Intelligence automate repetitive and time consuming tasks, allowing financial institutions to process large amounts of data faster and more accurately.

**3) Competitive Advantage :**

Artificial Intelligence to the financial institutions faster innovation and stay at the forefront of technology, which can give them a competitive edge.

**4) Compliance/Automate Monitoring & Reporting :**

Artificial Intelligence can automate monitoring and reporting requirements to ensure regulatory compliance.

**5) Credit Scoring :**

Artificial Intelligence analyse a variety of data, including social media activity and other online behaviour to assess customer's creditworthiness and make more accurate credit decisions.

**6) Cost Reduction :**

By automating tasks, financial institutions can reduce manual labour, streamline workflows and improve operational efficiency which can reduce costs.

**7) Customer Service :**

By answering questions and completing routine tasks 24/7, Artificial Intelligence powered personal assistants and chatbots can reduce the need for human intervention, provide personalized customer service such as real time credit approvals and offer consumers improved fraud protection and cyber security.

**8) Data Analysis :**

Artificial Intelligence can analyse massive amounts of data and extract insights and trends that would be difficult for human data scientists to detect, enabling more informed decision-making and a deeper understanding of market behaviour.

**9) Fraud Detection :**

Artificial Intelligence can prevent financial crime, such as fraud and cyber-attacks by identifying unusual patterns in financial transactions. This helps improve security in activities such as online banking and credit card transactions.

**10) Loan Processing :**

Artificial Intelligence can better predict and assess loan risks and stream line the process and approvals for borrowers by automating tasks such as risk assessment, credit scoring and document verification.

**11) Personal Finances :**

Artificial Intelligence can help people manage their personal finances by analysing goals; spending patterns and risk tolerance to develop budgeting advice and savings strategies.

**12) Portfolio Management :**

Artificial Intelligence analyse markets conditions and economic indicators to help investors make better decisions and optimize their portfolios.

**13) Predictive Analytics :**

Artificial Intelligence enable predictive modelling, which can help financial organizations anticipate market trends, potential and customers behaviour.

**14) Risk Management :**

Artificial Intelligence analyse data to help financial organizations assess and manage risks more effectively and create a more secure and stable financial environment.

**Percentages of Artificial Intelligence in Financial Sectors :**

**1) Customer Service :**

Around 56% of companies use Artificial Intelligence for automated customer service chatbots.

**2) Cyber Security and Fraud Management :**

51% of businesses utilize Artificial Intelligence to detect and prevent cyber threats.

**3) Customer Relationship Management (CRM) :**

46% of companies use Artificial Intelligence to analyse customer data and personalize marketing strategies.

**4) Inventory Management :**

40% of businesses leverage Artificial Intelligence to optimize inventory levels.

**Benefits of Artificial Intelligence in Financial Sector :**

**1) Automation :**

Artificial Intelligence can help automate workflows and processes, work autonomously and responsibly and empower decision making and service delivery. For example, Artificial Intelligence can help a payments provider automate aspects of cyber security by continuously monitoring and analysing network traffic. Or it may enhance a bank's client-first approach with more flexible, personalized digital banking experiences that meet client needs faster and more securely.

**2) Accuracy :**

Artificial Intelligence can help financial services organizations control manual errors in data processing, analytics, document processing and on boarding, customer interactions and other tasks through automation and algorithms that follow the same processes every single time.

**3) Efficiency :**

When Artificial Intelligence is used to perform repetitive tasks, people are free to focus on more strategic activities. Artificial Intelligence can be used to automate processes like verifying or summarizing documents, transcribing phone calls, or answering customer questions like “what time do you close?” Artificial Intelligence bots are often used to perform routine or low-touch tasks in the place of a human.

**4) Speed :**

Artificial Intelligence can process more information more quickly than a human and find patterns and discover relationships in data that a human may miss. That means faster insights to drive decision making, trading communications, risk modelling, compliance management and more.

**5) Availability :**

With Artificial Intelligence you can help your customers complete financial tasks, find solutions to meet their goals and manage and control their finances whenever and where they are. When running in the cloud, Artificial Intelligence and Machine Learning can continuously work on its assigned activities.

**6) Innovation :**

The ability to analyse vast amounts of data quickly can lead to unique and innovative product and service offerings that leapfrog the competition. For instance, Artificial Intelligence has been used in predictive analytics to modernize insurance customer experiences without losing the human touch.

**The Future of Artificial Intelligence in Financial Sectors :**

Artificial Intelligence will help drive financial sectors services growth. Many organizations have gone digital and learned new ways to sell, add efficiencies and focus on their data. Going forward they will need to personalize relationship based customer engagement at scale. It plays a key role in helping drive tailored customer responses, make safer and more accountable product and service recommendations and earn trust by broadening concierge services that are available when customers need them the most.

In addition, financial institutions will need to build strong and unique permission-based digital customer profiles; however, the data they need may exist in silos. By breaking down these silos, applying an Artificial Intelligence layer and leveraging human engagement in a seamless way, financial institutions can create experiences that address the unique needs of their customers while scaling efficiently.

**Conclusion :**

As we have seen Artificial Intelligence is poised to transform many aspects of the financial sector, from banking to investments to also insurance. Artificial Intelligence and machine learning promise to make finance more efficient, more accessible and also less prone to human error or bias. Yet, as with all rapidly changing technologies, Artificial Intelligence also raises many how challenges and concerns.

Governments and regulators will need to walk a very fine line in seeking to encourage innovation while also protecting consumers from potential abuses or unit- ended consequences.

The finance sector will also need to develop quality assurance and explainability of complex machine learning models to build trust with an users.

On the whole, though, Artificial Intelligence promises immense rewards for the finance sector and also for the broader society if the proper policy frameworks can be established. Consumers could benefit from more accurate underwriting, personalized wealth management and also fraud detection.

Artificial Intelligence marks the start of a new and very exciting chapter for the financial sector. However, realizing its full potential while managing the risks and transition costs will require co-ordinated efforts between the policy makers, companies, civil society and also consumers over the next decade and beyond.

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