

Role of Artificial Intelligence in Global Finance: An Overview

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ABSTRACT

Artificial Intelligence (AI) has become an integral part of every financial sector. It is found to be the key player in the banking and other financial service institutions. More than 80 percent of banks have understood the potential benefits of application of AI in the industry. The use of AI in financial institutions helps to resolve the practical issues in taking financial decisions. The aim of this paper is to understand the applicability of Artificial Intelligence in financial sector and to study the uses of AI in financial credit decisions and risk management.

Keywords: Artificial Intelligence, Financial credit decisions, Financial risk management

INTRODUCTION

Financial industry is broader and multi-layered in nature. It covers everything from accountancy and insurance to retail banking and investment management. Artificial Intelligence (AI), was a crucial technological advancement in the 2010s. It has increasingly becoming a leading technology in the 2020s. Currently Artificial intelligence is a key player in the global financial sector.

Artificial Intelligence (AI) has become the part of daily business activities of every banks and financial institutions. It is a computer-processed programming that finds and identifies fraudulent activity among others. Artificial intelligence (AI) applications are now widely used in the financial services sector, particularly for operational automation. (Königstorfer and Thalmann, 2020). AI improves work efficiency and reduces the costs of the industry. From credit decisions to quantitative trading and financial risk management, artificial intelligence (AI) helps the financial sector optimize and streamline the operations.

OBJECTIVES

1. To study with a brief overview the uses of artificial intelligence in financial sector
2. To study the application of AI in financial credit decisions
3. To study the application of AI in financial risk management.

METHODOLOGY

The study is based on secondary data and descriptive. The data collected from various journals, reports, and articles.

REVIEW OF LITERATURE

According to Kunwar M (2019) from his research study on “Artificial Intelligence in Finance: Understanding how automation and machine learning is transforming the financial industry” examines the influence of artificial intelligence in the field of finance. According to the study, as financial services progress throughout their value chain from processing to analytics to investing, more and more high-performing technologies will become available.

Zorica Golic (2019) from this study on “Finance and Artificial Intelligence: The Fifth Industrial Revolution and Its Impact on Industrial Sector” says that Understanding the business requirements of financial institutions, companies, and markets as well as having the technical know-how to interface with them are the foundations of artificial intelligence in the financial sector. They are the influential tools that totally convert this sector

Overview of Artificial Intelligence in Financial Sector

Programs and processes have been reorganized obligations to artificial intelligence, which has also automated tedious tasks to enhance customer support. More than 80 percent of banks have understood the potential benefits of application of AI in the industry. 70% of financial firms are using machine learning to foresee the cash flow actions, adjust their credit scores and detect deception. AI in finance has a market worth of \$9.45 billion as of 2021, and by 2030, it is projected to increase by 16.5%.

Earlier, ENO was the first natural language SMS text-based assistant that was adopted by a bank in the United States. Erica a chat box that is adopted in banks of United States which can answer to 5, 00,000 questions. It communicates with the customers through text, voice and tapping option.

Application of AI in Financial Credit decisions

Artificial intelligence solutions help banks and credit lenders to make keener underwriting decisions by using various dynamics that more accurately assess historically ignored lenders in the credit decision making technique.

The AI companies help the financial industry rethink the underwriting process. Financial institutions use AI and machine learning as its lending platform to provide advanced financial analytics and credit assessment. Through the use of AI and machine learning, the company hopes to assist non-prime financial institutions in providing better financial information and credit evaluation through their lending platform. The use of AI in financial institutions helps to resolve practical issues without placing the lender or the borrower in an untenable scenario, such as emergency expenses and bank loans for small businesses.

Artificial Intelligence is utilized in software for document processing that balances human verification with machine learning. The AI software allows business, organizations to increase promptness and truthfulness when analysing the financial documents.

Ocrolus' software an AI company analyses the bank statements, tax documents, mortgage forms, invoices and more to decide the credit eligibility, with areas of focus including mortgage lending, business lending, consumer lending, credit scoring and KYC.

AI helps financial institutions to quickly build accurate predictive models in taking decision around issues like fraudulent credit card transactions, digital wealth management, direct marketing and more. DataRobot an AI software company which is located in Boston created a software which helps the banks and financial institutions to make more accurate underwriting decisions by predicting which customers have a higher likelihood of default.

In order to evaluate the credit risk of applicants for consumer and small business loans, the financial industry can employ AI models to analyse thousands of financial indicators from credit bureau sources. The platform acquires portfolio data and uses machine learning to identify trends and predict application results. AI software can be used in to understand the applicant's online, offline and social data. It assists clients in fulfilling stringent KYC requirements.

Application of AI in Financial Credit Risk management

Machine learning is being used by the financial markets to develop more precise and adaptable models. The predictions from the AI models help financial experts to utilize existing data in locate trends, identify risks, conserve manpower and guarantee improved data for upcoming planning. Many AI-powered risk management tools rely on the scale of mass computing achievable in the cloud, where large quantities of data can be quickly examined and processed.

Financial firms can better manage their derivative portfolios with the use of AI platforms. AI is capable of rapidly extracting insights from tables and documents and giving clear responses to complicated financial queries. The most common use cases of AI supporting risk management include the following:

1. Threat intelligence study

Threat intelligence data gives businesses insight into things like attacker origins, signs of breach, usage patterns for cloud accounts, and onslaught on different kinds of cloud services.. Threat intelligence feeds can be combined, analysed at large scale using machine learning engines and processed in order to compute likelihood. With ransom ware infections and cloud account hijacking attacks on the rise, security teams may find that quicker data analysis and predictive intelligence are crucial tools for risk management.

2. Security information and event management

Massive amounts of log data and other recordings of security occurrences are being generated. To prevent threats to cyber security, security teams need to quickly spot specific threat pointers, see patterns of events as they occur and spot events happening in both cloud and on-premises backgrounds. Massive event data processing technologies can be enhanced by machine learning and artificial intelligence to provide more sophisticated alerting and detection capabilities. Microsoft Sentinel is an example of a cloud-based SIEM tool that includes machine learning and AI features.

3. Fraud detection

Fraud detection for insurers and financial services companies necessitates a vast array of data types and inputs as well as extensive processing. When combined with predictive models at scale, text mining, database searches, social network analysis, and anomaly detection approaches can help identify fraudulent transactions and activity. AI systems and machine learning engines can help with these tasks.

4. Workplace risk decline

AIs can process and analyse data related to workforce activities in high-risk environments. In order to enhance safety protocols and avert mishaps, artificial intelligence (AI) systems can assess behavioural patterns identified before to accidents and produce scenarios that are predictive. They can also help in managing other forms of risk like identifying illegal or unethical behaviour by employees through investigation of emails or other communications.

5. Data classification and monitoring

AI-based analytics engines can process all the data created and uploaded in a cloud environment and classify and tag it using specified policies based on recognized content categories and trends. Professionals in risk management and compliance can use this to identify sensitive data that requires robust security

measures. The AI tools can monitor the data for appropriate protections and access controls. Amazon Macie is an example AI for this purpose.

CONCLUSION

Since information processing is the primary function of financial markets, the financial industry is an obvious laboratory for exploring the possible effects of AI. The way that the competitive landscape has shifted in the finance sector over the past decade offers some indications as to what will happen in several industries when AI gets more affordable and accessible. AI has the capacity to quickly analyse vast volumes of data and develop solutions that are largely focused on the near future.

Financial markets require enormous amounts of data and processing power due to they are multidimensional information problems. The nature of the information problems being solved seems to be closely related to AI's ability to shift industry dynamics. In the banking industry, artificial intelligence helps companies in mechanize business-critical processes like risk management and fraud prevention while unlocking new capabilities, such as the use of chatbots and intelligent recommender systems for retail banks (Wall Street. 2019). AI technologies are currently being used by several banking institutions to automate fraud detection throughout their whole business. It is anticipated that AI is going to be used much more extensively in the Indian economy by 2035. At present the US and China are the determined countries making the adoption of AI technology, India is in progressive ways. In India in future jobs may be offered to approximately 2 lakh for AI experts and others in many sectors like education, healthcare, retail, etc. The National Business Research Institute and Narrative Science jointly performed research found that over 32% of financial services providers use AI technologies for speech recognition, government finance, audit, predictive analytics, and other applications.

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