ARTIFICIAL INTELLIGENCE IN FINANCE

The term "artificial intelligence" (AI) is no longer a new thing, but its application is expanding at a rate that is accelerating at an ever-increasing rate. Almost daily, fresh information comes to light on many topics.

Over the course of the last several decades, AI has seen widespread adoption across almost every sector. It is obvious to us in every direction we turn. The suggestions that we are receiving on Netflix, as well as the emails that we get offering an additional discount for an online store that we have not used in quite some time, are just a few examples.

The use of artificial intelligence (AI) by businesses helps them gain a competitive advantage in several ways, including the ability to make better, more data-driven decisions; directly increase their profits through efficient targeting or spot-on recommendations; reduce customer churn by identifying "hesitating" customers early on; automate some repetitive tasks that AI can do much faster than a human employee would; and many other advantages.

In the upcoming sections, we will discuss some of the primary sectors within the financial industry where artificial intelligence has the most significant influence and gives added value compared to more conventional methods.

Implementations of Artificial Intelligence in the Financial Industry

CREDIT SCORING

The process of assigning credit scores is one of the most important uses of machine learning in the financial sector. Money lending is a common business practice across a variety of financial organizations, including both huge banks and nimbler fintech startups. In order to do this, they have to make a precise evaluation of the creditworthiness of the person or the other firm.

In the past, analysts would make choices of this kind after conducting an interview with a person and accumulating the pertinent data points. However, artificial intelligence enables a quicker and more accurate evaluation of a prospective borrower, employing procedures that are more complicated than the scoring systems that were previously used. This is in contrast

to the scoring systems that were previously used. In order to accomplish this, sophisticated classification algorithms make use of a wide range of explanatory variables (such as demographical data, income, savings, previous credit history, transaction history at the same institution, and many others) in order to calculate the final score, which is ultimately what determines whether or not the individual will be granted the loan.

There is no human element, such as the bank employee's attitude on a particular day or any other elements that may influence the choice, which means that AI-based scoring systems have the ability to make impartial judgments, which is an additional benefit of these types of systems. People who do not have an extensive credit history may profit from this as well since it gives them the opportunity to demonstrate that they are trustworthy and have the financial capability to repay the loan nonetheless.

FRAUD PREVENTION

The prevention of fraudulent activity is yet another essential domain where machine learning may make a significant contribution. When we talk about fraud, we're referring to any kind of fraudulent action, including using stolen credit cards or laundering money. The former has been experiencing exponential growth over the last several years as a result of the rise in popularity of online shopping, the number of transactions conducted online, and the integration of third-party services.

There is a wide variety of machine learning algorithms, many of which specialize in the identification of irregularities and are particularly good at finding fraudulent transactions. An algorithm of this kind is able to sift through hundreds of transaction-related information (such as the customer's history of behaviour, location, spending habits, and so on) and provide a warning if anything doesn't appear to be quite right.

ROBO-ADVISORY

People are becoming more and more interested in passive investing as a result of the impact that inflation is having on our savings and the fact that it is no longer beneficial to keep money in a savings account since it is no longer beneficial to do so. And this is precisely where the role of Robo-advisors becomes relevant. These are services related to wealth management in which artificial intelligence is used to build together portfolio recommendations for clients based on the investors' particular objectives (both short-term and long-term), preferences towards risk, and disposable money. The only thing the investor needs to do is put money into the account every month (or set up an automatic transfer), and everything else, including choosing the assets to invest in, actually purchasing those assets, and potentially rebalancing the portfolio after some time has passed, will be taken care of for them. All of those are in order to guarantee that the client is proceeding in the most effective way to reach the goals that they have set for themselves.

The fact that these systems do not need any prior knowledge or experience in financial matters is one of their primary selling points since it makes them incredibly simple for users to use. Robo-advisors often come with lower fees than the services offered by human asset managers. Cost is another factor that plays a significant part in the decision-making process.

PERSONALIZED BANKING EXPERIENCE

The financial services industry is actively exploring ways to put artificial intelligence (AI) to work so that customers may enjoy more individualized banking interactions. A good illustration of this would be chatbots, which are becoming more difficult to differentiate from genuine human advisers. They are able to grasp the client's purpose by using more sophisticated NLP methods, and they will then attempt to steer the consumer in the appropriate route. They may assist the users in a variety of ways, such as helping them change their password, checking their current balance, scheduling transactions, and so on. Additionally, these chatbots are typically able to understand the emotions of the consumer and change their answer based on those feelings. If they determine that the customer is really frustrated, it may make sense to connect them to a human consultant so that they may work to resolve the issue as quickly as possible and prevent any more aggravation from occurring. The ever-increasing capabilities of intelligent chatbots make it possible to save money by lowering the amount of labour that has to be done in contact centers.

PROCESS AUTOMATION

In the Know Your Customer (KYC) procedure, many different types of financial institutions either make use of specialized software or develop their own solutions in-house. When dealing with money, you may often be asked to provide a valid form of identification. This is done to prevent fraud. There are a lot of fintech businesses that make the procedure extremely simple. All you have to do is scan your ID using your mobile phone, and then you have to snap a picture to prove that you are the same person as the ID. An AI-based approach tries to see whether there is a match in the backdrop while simultaneously determining whether or not the ID is legitimate and whether or not there is anything suspicious about the image. Working with pictures is where Deep Learning and architectures like Convolutional Neural Networks (CNNs) show the most promise in terms of producing useful results.

In this article, we have discussed the areas of the financial industry in which artificial intelligence, in its broadest sense, can provide a great deal of value. These lists are by no means exhaustive, however, as the AI landscape and the financial landscape are both dynamic and adapt to the progress that is made each and every day. There is one thing that

can be stated with absolute certainty: we are now on the edge of an AI-based revolution that will have an effect not just on corporations but also on people.