
The Usage Of Artificial Intelligence In Banking

Artificial Intelligence and Banking

As global technology has evolved over the years, we have moved from Landline phone to Mobile, Television to Internet and Branch Banking to Mobile Banking and today we are smoothly and gradually adopting Artificial Intelligence (AI). It was John McCarthy who introduced the word AI to the world in 1956. It involves process automation of robotics to the actual process of robotics. AI is very popular today among large companies owing to the data handled by these companies. The unique feature of AI is that it understands the data patterns that have led to the growth in demand for it. AI is much more efficient in identifying data patterns than humans thus it is beneficial for companies to understand their target group and give them better insight. AI is being seen as the next big thing by companies all around the world including the finance industry. It has the ability to change banking and financial transactions in the world. AI is not the only disruptive technology. The advanced analytics, blockchain, quantum computing, internet of things, cloud etc. are in the row to change our banking experience in the coming years. AI is of two types, Weak AI and Strong AI.

- Weak AI- It is also described as Narrow AI, is the system which is set up only to fulfil or accomplish a particular task. It works according to the rules that are set and are bound by it. Weak AI is just like humans, has the capability of all cognitive functions and is not distinct from the human mind. The best example of weak AI is Apple's Siri or Amazon's Alexa.
- Strong AI- It is also known as full AI, has much bigger prospects than the weak AI with huge capabilities and functionality. It can broadly mimic the human brain. It is so powerful that its actions and decisions are exactly similar to a human being. It also has the understanding of power and consciousness.

However, the difficulty lies in defining intelligence accurately. It is highly difficult to set boundaries to intelligence as far as strong AI is concerned. Hence weak AI is more preferable, because of its ability to accomplish assigned tasks only with optimum efficiency compared to a human.

Artificial Intelligence and Bank Journey

As per 2016 survey by Bloomberg Capital conducted in association with Regina Corso Consulting, the national survey asked American adults what they thought about traditional banking institutions, Fintech companies and new financial technologies. Interestingly, Majority of Americans believed that most of the financial institutions will not exist in same form in the next few decades, needless to say traditional Banking will be extinct. As per Accenture Financial Services Global Distribution & Marketing Consumer Study 2017, for majority of consumers, especially Gen Y and Gen Z- Google, Apple, Facebook and Amazon (collectively known as GAFA) are attractive alternatives to traditional financial providers. The trend shows that millennials are accustomed to and prefer the level of technology offered by the tech giants. Fintech's and tech giants like Google, Apple who already have entered digital payments market astounding strides in technology including AI. They have in-house AI scientists, big data and

state of the art technology. Now, the challenge is before the bank to complete with fintech and technology firms at a much bigger scale.

Indian Scenario- Indian banking space, a decade or two back one of the most cumbersome fields as far as customer convenience was concerned involving long queues and lengthy procedures. Since then, this sector has come a long way with automation, core banking, ATMs, online banking services, e-KYC and much more serving today's tech-savvy customers. Since last 2-3 years, the Indian Banking and Financial services has been hit by Artificial Intelligence. Machine Learning and virtual agents. India's biggest bank SBI launched SIA, an AI-enabled virtual assistant specializing in assisting customers with everyday banking tasks that handles nearly 10,000 inquiries per second. HDFC bank, has introduced "Eva". IndusInd bank has launched few banking services supported by Alexa from Amazon. Introduction of AI in banking is not just limited to chatbots. SBI is using AI to study in real time, the facial expression of its customers visiting the bank's branches to find out if they are happy or sad. ICICI Bank has deployed robotics software to ease over 200 of its processes across various business functions. Research and prediction say undoubtedly AI will herald a transformational change in the banking industry. Currently AI is being used for customer service, wealth management, advanced analytics and fraud detection. For any bank to survive and grow the most important criteria is increasing bottom line. Apart from gaining market share banks also look at cutting costs especially for tasks which are mundane and repetitive. Squandering human resources on such tasks just adds to the costs of running business. As per Autonomous report on AI, by 2030, traditional financial institutions can save 22% in costs. The report says that banks can save \$ 490 billion by adopting AI in front office. Undoubtedly, financial institutions will reap benefits of AI, although the cost of investing is very high but there is no two ways. After the current pandemic of coronavirus, the way of living life will be changed and one of them will be the way of doing banking by the people. People will prefer to go digital and the bank who has already invested huge amount on digitisation will take the lead.

AI can create 'wow' moments for the customers

Customers expect bank to anticipate their need and preferences. As banks move forward in digital bank journey, there will be vast amount of digital data available with banks. AI can bridge the gap between isolated customer interactions into a seamless thread of customer experience. Intelligent prediction and customization will make customers feel as if every product or brand experience was tailored just for them. We currently live in a world where we constantly leaving our digital footprints, which display our spending habits, preferences in travelling, shopping etc. On applying analytics and AI, to this real time data, banks can understand their customer's need and offer products which will give them 'wow' experience.

In today's fast paced world with time constraints very few customers actually visit banks to enable them for creation of a long-term relationship. The only link is data of customers. It is a bitter truth for banks the quaint banking days are over. In 5 ways AI has transformed banking and finance industry,

Risk Assessment and Decision Making

As AI is learning from past data, it is natural that AI should succeed in the Financial services domain, where book-keeping and records are second nature to the business. Let's us take the

example of credit cards. Today, we use credit score as a means of deciding who is eligible for a credit card and who is not. We can make it more customized where interest rate will be charged on the basis of analysing individual's loan repayment habits, the number of loans currently active, the number of existing credit card, etc. Now, take a minute to think about which system has the capability to go through thousands of personal financial records to come up with solution- a learned machine of course. This is where AI comes in. AI also makes loan approvals easier, reduce operational costs and these savings can then be extended to customers in the form of lower rates.

Fraud Detection and Management

The loan a bank gives you is a basically someone else's money, which is why you also get paid an interest on deposits and dividends on investments. This is also why banks and financial institutions take fraud very, very seriously. AI is on top when it comes to security and fraud identification. It can use past spending behaviours on different transaction instruments to point out odd behaviour, such as using a card from another country just a few hours after it has been used elsewhere or an attempt to withdraw a sum of money that is unusual for the account in question. AI has the ability to stop this type of fraud.

Financial Advisory Services

AI is also expected to play a significant role in the sales and recommendation of financial products. For instance, a robo-advisor might recommend portfolio changes. It is also believed that robo-advisors could potentially employ some level of machine learning to recommend a specific car or home insurance plan. A report states that artificial intelligence will become the primary channel through which financial institution and their clients will interact in future.

Another evolving field is bionic advisory, which combines machine calculations and human insight to provide options that are much more efficient than what their individual components provide. Collaboration is key. An excellent balance and the ability to look at AI as component in decision-making that is as important as the human viewpoint is the future of financial decision-making.

Investment and Trading

Investment companies have been relying on computers and data scientists to determine future patterns in the market. As a domain, trading and investments depend on the ability to predict the future accurately. Machines are great at this because they can crunch a huge amount of data in short while. Machine can also be taught to observe patterns in past data and predict how these patterns might repeat in the future. While anomalies such as the 2008 financial crisis do exist in data, a machine can be taught to study the data to find "triggers" for these anomalies and plan for them in future forecasting as well.

Personal Financial Management

Personal financial management is one of the recent developments on AI-based wallet. Wallet started by a San Francisco based start-up, uses AI to build algorithms to help the consumers make smart decisions about their money when they are spending it. The idea behind the wallet

is very simple. it just accumulates all the data from your web footprint and creates your spending graph. Advocates of privacy breaching on the internet may find it offensive but, may be this is what lies in future. From a small-scale investment to a large investment AI commits to be a watchdog of future for managing finances.

A Game Changer Technology

It is estimated that marketplace lending is expected to grow from 48% annually from 2019 onwards. Looking at Indian market as an example, currently, there are approximately 60 million small businesses in India looking for funding. Out of which only 33 percent are able to access any kind of institutional credit. Almost 80% of Micro Small and Medium enterprises self-finance themselves, 32% rely on their friends and relatives for credit and an additional 12% try raising from informal banking networks. So, there is immense opportunity available in the market. Sooner or later AI will become inseparable part of banking journey. The early movers will gain a lot in terms of market share and customer retention.

AI technology combines with big data and machine learning, monitors more than 1000 parameters to learn and authenticate behavioural biometrics of a customer. Information like how customer holds the phone, the way they interact with it, touch it, the way they scroll and swipe is collected from customer's mobile. Customers' cognitive choices, such as how they fill in their passwords or dates are monitored and analysed.

Face recognition in banking has gained momentum in past few years. It is part of biometric authentication. Recently OCBC Bank started AI powered facial recognition system at its Holland Village branch. The system instantly identifies its 'premier banking' customers and this creates in enhanced customer service wherein managers are equipped with customer's banking history in addition to be able to identify and greet customers by their preferred name, offer them their preferred drinks and magazines. Facial recognition system can be used in the ATM also where ATM will authenticate your face before cash withdrawal. This will reduce the risk of ATM card skimming.

Risk, issues and challenges with AI

Bank do hold vast amounts of data which can be leveraged for benefit customers and clients. But there is a catch, this data is confidential. Banks need to protect sensitive data without adversely impacting the project. AI Algorithms are also susceptible to bias, the fact being they are created by humans and by nature humans are biased. It is essential that while building, this factor is accounted for. Checks and controls need to be added at the time of implementation of AI. Banking and Financial Industry also need to consider the ethical and legal liability associated with AI. Regulatory functions attract huge penal liabilities. For example, if a loan application is rejected by machine learning system the decision should be based free from bias. But this does not make AI case weak, rather the finance industry and regulators need to come together to work out these issues in benefit of industry and customers alike. No technology is without its pitfalls.

Conclusion

Artificial Intelligence is slowly changing the way people think and act and it is taking our mind to

the next level. Imagine a machine that has the ability to think, learn, create and form its own ideas and thoughts. With the benefits and potential of such platform, computer power has increased by massive amounts.

Face recognition, finger prints or retina scan for unlocking entrance or access points are just some of the common applications of AI today. The potential and future development in this field is somewhat endless with ongoing research. Undoubtedly, the banks and financial institution that benefit most from AI will be those that are prepared to adjust their old age approach.

Artificial intelligence will clearly have a huge impact on the financial services sector. Banks will redefine how they work, what they sell and how they interact with their customers and employees. They will redefine their operating structures for an AI-enabled process and operational efficiency. And new AI application will create growth for the bank through improved customer service and employee experiences.

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