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BIG DATA FOR BANKING SECTOR

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ABSTRACT

Our goal is to find out what changes can come after the data revolution in Banking sector, After the introduction of Big Data companies started to monitor every single activity of their clients and customer how they spend and etc. We want to understand the future of banking industry and how the trends will work and how global players will see this and what benefit will customer get after all this after all it's there data on which company will feed.

I. INTRODUCTION

Banking sector is one of the sectors which generates an immense amount of data every day through various transactions of its customers and staff. This data is an excellent example of big data, which is defined as "large, diverse sets of overflowing information that is growing at ever-increasing rates." To put it into simple words the actual size of this data, we generate 2.5 quintillion bytes of data daily! This data is a very powerful tool for banks and other financial institutions that want a better and more informative insight on their customer base better, product performance, and market trends by incorporating big data analytics.

The banking industry is one of the best examples of how big data technology has revolutionized the customer experience. Unlike the past days when customers had to stand in line for hours just to deposit their pay check. Customers can now check their account balances, deposit checks, pay bills, and transfer money from their mobile phones— there's no need for them to even leave the house.

Real-time Data Analytics:

This refer to either one of the following things: the sudden analysis of data on the edge of the network as it is generated, or analyses that immediately return results. But what exactly is the source of all this data? The technology used for collecting data from smartphones, tablets, and the Internet of Things has made it easier than ever for consumers to use online resources to communicate with companies, research products, purchase items, recommend policies to customers and even perform banking tasks. This data is then used to develop customer profiles that can identify trends, predict expenses, and help banks better understand their customer base. This is where adopting big data processing tools and strategies to tame these vast amounts of data becomes so important to the banking industry. Using both personal and transactional information collected through various means, banks can establish an in-depth view of their customers in order to:

- Identify spending patterns
- Segment customers in categories
- Improve risk management processes
- Personalize advertisement experience
- Incorporate retention strategies
- Analyse customer feedback and sentiment

Benefits of Big Data Analytics in Banking and Finance

- **Customer Profiling and Segmentation:**

Customer segmentation has become essential for every establishment in the financial service industry because it enables banks and credit unions to segregate their customers into neat categories based on different parameters. These Banks and Financial Institutions need to develop means to obtain a detailed customer profile to help them segregate, categorize and understand their customer.

These customer profiles are able to account for a variety of queries, including:

- customer's demographic
- number of accounts

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- current active products
- Declined offers
- Desirable offers
- Major life events
- Inter-customer relations
- Satisfaction with the bank experience
- Service preferences
- **Improve Individual Customer experience:**

In order for Banks and Credit Unions to be able to perform well in a fast-moving market, they need to adopt a banking analytics-oriented shift in perspective and tailor-made customer experience are absolute necessities, in fact, last year, 33% of customers to leave the banks did so because of a lack of personalization in the service they received from them. Personalized recommendations have now levelled to the point were staying ahead means putting the right product in front of people but also making it happen at a precise point in time when it is most likely to be accepted by user. Banks have to maintain technological infrastructure that is prepared for the demands of momentary markets. They need new data streaming technologies to enable APIs, in-stream decision making and analytics, AI and ML, and much more to stay ahead. To be able to enable streaming, one has to employ personnel with knowledge of relevant think

- **Anomaly or Fraud Detection:**

The two most important and necessary to resolve issues are in Finance Industry are Money laundering detection and payment fraud. The detection of these two are some of the most important use cases in the financial industry. The existence of both can inflict great financial loss, as well as it could cause significant damage to the bank's corporate image. Unlike other industries, the reputation of a bank is critical to it and is a reflection on its credibility.

Streaming analytics offers a solution to this: comprehensive, real-time anomaly detection mechanisms to safeguard these financial institutions from fraudulent activities. Markov models are generally used to dynamic models with high entropy, it helps to identify rare transaction sequences which is especially useful in identifying complex fraudulent activity carried out by experienced criminals into a series of smaller transactions.

- **Market Surveillance and Risk Management:**

In rapidly changing finance and capital markets, measuring risk as an end of day process is no longer adequate. So, these markets are moving towards intra-day value at risk computations in order to assess risks to market portfolios and take corrective measures in real-time. Streaming analytics can be set-up to provide support during computations of risk and to aide banks to minimize and manage risk. Banks can obtain a low latency with real-time data streaming and analytics. It is a high-performance solution that can listen to market prices compute value at risk almost instantly.

Real-life Examples:

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1. Alibaba's 3-minute loans:

Jack Ma's online bank used real-time payments mixed with artificial intelligence and risk management systems to verify and lend loans worth $290 billion to 16 million companies. The loans can be drawn in 3 minutes right from a smartphone. The system was able to achieve this with a 1% default rate. This is an instance of the potential of real-time analytics.

2. Fintech Robo-advisors:

The recent success of the fintech company Robo-Advisors, offering automated investment advice to the users based on their customer profiling. This shows that Big Data is already being converted into new compelling customer services.

3. Barclay's Social-Listening

Barclays has been using "social listening", i.e., sentiment analysis of its users, to attain insights from user activity on their social profiles. When the company introduced its mobile app, people under 18 were unable to transfer or receive money which upset many of its customers. The dissatisfied customers voiced their disappointment on social media. Barclays revealed the problem soon after by collecting this data, and the company was able to fix the issue by giving teens the full access of there app.

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II. CONCLUSION

Big data will provide many opportunities for Banks and fintech companies to understand the spending nature of their customer by using that they can charge different companies for advt. their product first it's already happening in the form of vouchers and prizes we get after any transaction and Providing small loans to the user at the high interest rate will also fill the belly of these companies as we know The total number of current and savings accounts in banks has risen to 157.1 crore in March, 2017, compared with 122.3 crore two years earlier. The Jan Dhan programme is at the vanguard of the global growth in banking accounts and the number of adults Indian account have seen rise of 80% these number also support the growth of banking institution and will give rise to paperless transactional economy we have already seen the rise of major player (Gpay, PhonePay, etc.;) that will play a vital role in this revolution as the no of accounts will grow the more these company will get the data.

III. FUTURE SCOPE

Many new technologies will be going to introduce in Banking Sector:

1. Voice Banking – This is a technology will give user a new way of Banking by Voice, it can help us to finding out the consumer's bank balance, electricity bills, amongst other things. It may be available in almost all banks; however. Some studies say it will save 3 billion $ of industry by providing this facility.

2. Blockchain - It is said to be the future of the banking industry. It is the core component of cryptocurrency and the future of banking and financial services. Concept of this technology is to create blocks that process, verify and record transactions without modifying the information. It is going to revolutionize the way financial services like payments, clearance and settlements, stock exchanges, and lending are conducted.

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