

A Survey on Bigdata Analytics using in Banking Sectors

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ABSTRACT

Current days, banking industry is generating large amount of data. Already, most banks have failed to utilize this data. However, nowadays, banks have starts using this data to reach their main objectives of marketing. By using this data, many secrets can be discovering like money movements, thefts, failure. This paper aims to find out how big data analytics can be used in banking sector to find out spending patterns of customer, sentiment and feedback analysis etc. Big data analytics can aid banks in understanding customer behavior based on the inputs receive from their investment patterns, shopping trends, motivation to invest and personal or financial backgrounds. This data plays a necessary role in leading customer loyalty by designing personalized banking solutions for them.

KEYWORDS: Big data analytics, banking, customer, finance, marketing

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1. INTRODUCTION

Now a days Big data in banking industry is the ever-growing sector. The big information revolution happening in and around twenty first century has found a resonance with money service corporations, considering the dear information they've been keep since several decades. And although the gathering of this information was random, since method of accounting has continuously been historical in nature, the potential unbarred by massive information analytics exceeds any expectation antecedently expected from this account set. This information has currently secrets of cash movements, helped stop major disasters and thefts and perceives client behavior. Banks reap the foremost edges from massive information as they currently will extract smart info fast and simply from their information and convert it into meaningful edges for themselves and their customer

2. Literature Review

Present days competitive world where technology plays a very important role and we talk about banking sector or industry there is a positive relationship between technology and customer satisfaction. They also stated that satisfaction of customers is not merely introducing innovative products and services rather it is much more than that. They also found that if the bank wants to become the market leader in the competitive environment it must use the innovation approach in all the aspects like products and services. Also there is a significant relationship between technological

innovation and cost. As the innovation increase the cost is also increase.

This paper brought to light that with e-banking complexities on customer satisfaction. Results shows that there are factors which leads to customer satisfaction particularly in e-banking, which is one of the very important and fast growing way of doing banking. Factors are accessibility, convenience, security, privacy, content, design, speed, fees and charges have influence on customer satisfaction where the other factors notified have no significant influence.

3. Big data analytics

Big data is the term for a collection of datasets so large and complex that becomes difficult to process using on-hand database management tools or traditional data processing applications. Sometimes it is also defined as "Big data is same as data but bigger in size". In present days every minute of every day getting large amounts of data.

For example:

- more than 204 million email messages/day
- Over 2million Google search queries/sec
- 48 hours of new YouTube videos/min

3.1. The 4v's of Big data

- **Volume:** it is getting vast as compared to traditional sources through which data used to be captured large

amounts of data generated every second (emails, twitter message, videos, sensor data....)

- **Velocity:** the speed of data generated is being generated, it is phenomenal and never stops the data of data moving in and out of data management.
- **Variety:** data comes from various sources, machine generated and people generated different data formats in terms of structured or unstructured (80%) data.
- **Veracity:** trustworthiness of the data/the quality of data, as one has little control of the volume.

3.2. Big Data applications

- Public sector services.
- Healthcare contributions.
- Learning services.
- Insurance services.
- Industrialized and Natural Resources.
- Transportation Services.
- Banking Sector and Fraud Detection

4. Big Data In Banking Sector

Banking is the life blood of trade, commerce and industry. Now-days, banking sector acts as the backbone of modern business. Using big data analytics more no of types of data are collecting in banking sector like customer's accounts data, daily deposits and transactions info, ATM transactions, net banking data, mobile banking data are complex to handle in present day. So using big data analytics, this improves the modern style of data are stored and managed easily with more security. Development of any country mainly depends upon the banking system. A bank is a financial institution which deals with deposits and advances and other related services. It receives money from those who want to save in the form of deposits and it lends money to those who need it. The banking is one of the most essential and important parts of the human life. In current faster lifestyle peoples may not do proper transitions without developing the proper bank network. The banking System in India is dominated by nationalized banks. The performance of the banking sector is more closely linked to the economy than perhaps that of any other sector.

4.1. Advantages in banking sector with Big data:

- A. **Sentiment Analytics:-**Banks have to continuously observe what customers say for marketing purpose. Banks have to identify who are the main customers and by getting feedback they have to improve those cracks to increase productivity and services.
- B. **Changes in Service Delivery:-**Big Data would possibly comprise of a huge system, however its job is to change tasks. Whenever a reputation or account range is entered into system, it sifts through all the information and provides solely the desired information. This can enable banks to contour work processes, and saves each time and prices. Huge knowledge will enable organizations to spot and rectify, before they have an effect on their customers.
- C. **Fraud Detection and Prevention:-**This is the main problem faced by banking sector. Big Data will ensure that no unauthorized transactions will be made, thus providing security and safety to the entire system.
- D. **Enhanced Reporting:-**After getting access to huge amount of data, containing needs of different customers, banks can offer those needs in a meaningful way. By using this data, banking industry will provide exactly the

information required by the customer instead of any other information.

- E. **Risk Management:-**The early detection of fraud could be a massive a part of risk management, and large information will do the maximum amount for risk management, because it will for fraud identification. Massive information locates and presents massive information on one massive scale that produces it easier to cut back the amount of risks to a manageable number. Massive information plays a polar role in desegregation the banks needs into a centralized, practical platform. This reduces the banks possibilities of losing information, or ignoring fraud.
- F. **Customer segmentation:-**By using this data, targeted marketing programs can be made. By identifying the card usage habits of customers, loyalty programs can be created. By using this way, relationship will be build up with valuable customers.
- G. **Examine customer feedback:-**Customers sentiment can be collected in the text form from various social media websites. Once these sentiments can be collected, they can be classified into positive and negative and by applying various filters they can be used to provide services to customers.
- H. **Detect when a customer is about to leave:-**As we know the cost of acquiring new customers is greater than retaining its old customers. When the bank takes care of customers need by understanding the problem, attention must be given to find a solution.

5. Recent Trends in the Banking System

- **Electronic Funds Transfer (EFT):** It is a system whereby anyone who wants to make Payments to another person company etc.
- **Electronic Clearing Service (ECS):** It is a retail payment system that can be used to Make bulk payments receipts of a similar nature especially where each individual payments is of a respective nature and of relatively small amount.
- **RTGS system** is maintained and operated by RBI and provides a means of efficient and faster funds transfer among banks facilitating their financial operations.
- **Automatic Teller Machine (ATM):** It is the most popular devise in India, which enables the customers to withdraw their money 24 hours a day 7days a week.
- **Tele - Banking:** It facilitates the customer to do entire non-cash related banking on telephone.
- **Net Banking:** It is done through internet by individuals and firms for transfer of funds, booking rail tickets, purchasing share etc.
- **Mobile Banking:** Mobile banking is a service provided by a bank or other financial institution that allows its, customers to conduct a range of financial transactions remotely using mobile device.

6. Conclusion:

Big data analytics is currently being demand across many domain of banking sector, and helps them deliver higher services to their customers, each internal and external, alongside that is additionally serving to them improve on their active and passive security systems. Using big data analytics the different form of data are handling easily, these are bank customer's accounts data, daily deposits and transactions info, ATM transactions, net banking data, mobile banking data. This study analyzed transactional and

nostalgic analysis for the Banking Sector. This method helps to understanding the behavior of customer and plays a major role in trust of customer loyalty by improving the good banking solutions for them.

7. References

- [1] QATCH Regulations, Direct Credit and Debit System Annex No. (153), March 2010
- [2] OCBC Bank nets profits with interactive, one-to-one marketing and service. IBM Software: Smarter Commerce; July 2012
- [3] Business Software themes for 2014. Wells Fargo Securities. Equity Research; 2014
- [4] Utkarsh Srivastava, Santosh Gopalkrishnan, "Impact of Big Data Analytics on Banking Sector: Learning for Indian Banks", *Procedia Computer Science* 50 (2015) 643 – 652.
- [5] "Healthcare System with Big Data Analytics: A Survey", *International Journal of Modern Computer Science and Applications (IJMCSA)* Volume No.-4, Issue No.-3, May, 2016, ISSN: 2321-2632 (Online)
- [6] https://en.wikipedia.org/wiki/Big_data
- [7] <http://www.pactera.com/resources/blog/how-big-data-is-revolutionizing-fraud-detection-in-financial-services>
- [8] <https://itsvit.com/blog/big-data-analytics-banking-sector/>
- [9] en.wikipedia.org/wiki/Big_data
- [10] https://en.wikipedia.org/wiki/Banking_in_India

