

A STUDY ON OPPORTUNITIES CREATED BY BIGDATA FOR INDUSTRIES

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Abstract: In today's world data has become important everywhere in industries. With the help of bigdata, industries are making smart decision, getting new micro markets, smart marketing analytics for long & short term growth. Bigdata is now reached in every part of modern life & into business area. Companies in any industry can use bigdata to enhance their effectiveness, their marketing & products which lead the career opportunities in this field are limitless [5]. The capabilities of bigdata platform creating opportunities for industries like medicine, retail, construction, banking and transportation. By coupling with bigdata major advantages are achieved by businesses now days. Its improving the operational efficiency of businesses with much more improved customer services which is heart of any business for new products of any business with new customers and new markets.

Key Words: Bigdata, Industries, opportunities, smart decision, improved customer service

Introduction: Bigdata with analytics has been evolving in businesses rapidly due to the constant growth in data volume, complexity, and the need for real-time insights in business for customers, about product and competitors. Bigdata is now reached in every part of modern life & into business. Successful business industries relent on data for their decision making in current fast changing global market place. The bigdata industry is growing fast and is predicated to continuous growth in coming years.

Companies are adopting bigdata to enhance their effectiveness, their marketing & products which lead the career opportunities in this field are limitless [5]. The capabilities of bigdata platform creating opportunities for industries like medicine, retail, construction, banking and transportation.

Bigdata & its analytics software's allow industries

to look through large size & variety of data with processed information feeling confident while making smart decisions.

Materials and Methods: My Research paper will helpful to authorities, decision makers in industries, person's wishing to make career in industries by means of business analytics using bigdata. The research paper focuses business industries where sales, marketing and production is at very enormous amount of data is controlled. Here study will create opportunities for industries with bigdata along with its tools. software's makes bigger transformation in industries by making bigger opportunities. According to McKinsey, the operational uses of bigdata reimbursements with 180 degree transform economies & uses in new tendency of productive growth [5]. By binding bigdata, businesses will get more efficiency in their operation with their decision in strategic implementation of policy for new market customer, their services for their new products which will more accepted by the new customer. The industries which are implementing Bigdata in their business routines it shows productivity rates & profitability that are 6% height than others [5]. Bigdata is giving big impact for industries by taking advantage of advancements in analytics & focusing

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1 to 2 areas in organization. Industries making use of bigdata to find out new micro markets. Marketing is under pressure to show results, cut costs & rive growth. Here industries can use bigdata & its tools for smart analytics for their short term & long term growth. McKinsey in David court explains how industries focusing on their performance by implementing bigdata by getting powerful new tools in the hands of front line mangers, companies must focus on big decisions [5]. Companies profit will highly impacted by use of bigdata in their routines processes with their policies by making use of bigdata to make better pricing decisions [3]. A new generation of pricing & revenue management practices can lead to meaningful results with help of power of bigdata & analytics. Industries need specialists from bigdata who can analyze, distill & clearly communicate information of greatest potential value. For industries, bigdata talent is a critical issue, by 2018 the United States alone faced a shortage of 1, 90,000 professionals with deep analytical skills [5]. This indication is for greater opportunities of bigdata professionals in industries. In industries sales targets & leads can proliferate but they are no use if it creates a morass of information for sales person. Here bigdata allows precise micro-segmentation of sales data. For this research the primary data will be collected from selected companies by using current technologies like google form or feedback received on social media. For deeper study reference books on the same will be referred as secondary data collection with different business journals, newspapers & also information from internet with specific customers.

Result and Discussion: This study will express opportunity created by bigdata for different industries in diverse way. Bigdata has created numerous opportunities across various industries with key opportunities created by Bigdata for industries:

1. Healthcare

- **Personalized Medicine:** Bigdata enables more accurate, personalized treatments by analysing genetic information, patient history, and environmental factors.

- **Predictive Analytics:** Hospitals and healthcare providers use Bigdata to predict disease outbreaks, hospital readmissions, and patient health trends, enabling preventative care.
- **Improved Drug Development:** Analysing large datasets accelerates the drug discovery process and clinical trials, reducing the time and cost of bringing new drugs to market.

2. Retail

- **Customer Insights and Personalization:** Bigdata helps retailers analyse consumer behaviour and preferences, offering personalized recommendations and targeted marketing.
- **Supply Chain Optimization:** Retailers can better manage inventory and demand forecasting, ensuring product availability while reducing waste.
- **Dynamic Pricing:** Retailers can use real-time data to adjust prices based on market conditions, competitor pricing, and consumer demand.

3. Finance

- **Fraud Detection and Prevention:** By analysing transaction patterns, financial institutions can identify anomalies.
- **Risk Management:** Bigdata allows financial firms to assess risk more accurately and develop better strategies to mitigate potential losses.
- **Customer Segmentation:** Banks implements bigdata to understand their client's behaviour, allowing for more targeted business, such as personalized investment advice or insurance plans.

4. Manufacturing

- **Predictive Maintenance:** By monitoring the condition of machinery and equipment, manufacturers will do prediction for happen, minimizing downtime and repair costs.
- **Supply Chain Efficiency:** Analysing data across the supply chain allows manufacturers to identify bottlenecks, optimize logistics, and improve inventory management.

5. Telecommunications

- **Customer Retention:** By analysing usage patterns, telecommunications companies can predict customer churn and take proactive steps to retain customers.
- **Network Optimization:** Bigdata helps in monitoring network performance, improving coverage, and enhancing user experience by identifying areas of high traffic or failure.
- **Targeted Marketing:** Telecom companies can analyse customer data to deliver targeted offers and services, increasing customer satisfaction and sales.

6. Transportation and Logistics

- **Route Optimization:** Bigdata enables real-time analysis of traffic, weather, and road conditions, leading to optimized routing for delivery vehicles and reducing fuel costs.
- **Fleet Management:** By monitoring vehicle performance and driver behaviour, companies can optimize fleet utilization and reduce operational costs.
- **Demand Forecasting:** Airlines, railways, and shipping companies use Bigdata to predict demand, improve scheduling and optimize ticket pricing.

7. Energy and Utilities

- **Smart Grids:** Bigdata is essential for optimization of energy distribution, reduce waste and ensure more reliable service.
- **Energy Consumption Optimization:** Bigdata enables the analysis which will reduce energy costs and improve sustainability.

8. Agriculture

- **Precision Farming:** Collection of data on weather, soil conditions, crop health and other factors, for planting, irrigation and harvesting.
- **Crop Prediction:** By analysing historical weather patterns and soil conditions, farmers can predict crop yields.

9. Education

- **Personalized Learning:** Educational organizations can understand student's

learning patterns and offer personalized content and learning paths.

- **Curriculum Development:** With bigdata knowledge gaps and improve course offerings, tailoring education to meet students' needs will be possible.
- **Student Retention:** By analysing organizations will identify at-risk student's and provide targeted retention rates to required students.

10. Entertainment and Media

- **Content Personalization:** Streaming services use Bigdata to recommend personalized content to users based on viewing history, preferences and social media behaviour.
- **Audience Engagement:** Media companies use Bigdata to track audience behaviour and engagement, optimizing content creation, distribution and marketing strategies.
- **Predictive Content Creation:** By analysing trends and social media sentiment, entertainment companies can predict what types of content will be popular and generate higher revenue.

11. Government and Public Sector

- **Smart Cities:** Bigdata is used in urban planning, traffic management, waste management and public safety to create smarter, more efficient cities.
- **Public Health Surveillance:** Governments use Bigdata to track disease outbreaks, environmental factors and health trends to improve public health outcomes.

12. Hospitality and Tourism

- **Dynamic Pricing:** Hotels and airlines use Bigdata to adjust prices in real time based on demand, booking patterns and competitor pricing.
- **Operational Efficiency:** Bigdata helps optimize staffing, manage inventory and streamline operations in the hospitality industry.

Conclusion: As data continues to grow, the potential applications with bigdata will expand even further, impacting virtually every sector of the

economy. Now a day's data has become important everywhere in industries. Using bigdata and its analytics industries are making smart decision, getting new micro markets, smart marketing analytics for long & short term growth. Improving pricing & promotions, creating road maps and reacting in time which will lead to better strategy for performance. At nutshell, bigdata forcing industries to consider new strategies, technology and talent for excellent productivities.

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References

- [1] D. Che, M. Safran, and Z. Peng, "From Bigdata to Bigdata Mining: challenges, issues, and opportunities," in *Database Systems for Advanced Applications*, pp. 1–15, Springer, Berlin, Germany, 2013.
- [2] IDC, "Analyze the future," 2014, <http://www.idc.com/>.
- [3] J. Manyika, C. Michael, B. Brown et al., "Bigdata: The next frontier for innovation, competition, and productivity," Tech. Rep., Mc Kinsey, May 2011.
- [4] K. Douglas, "Infographic: bigdata brings marketing big numbers," 2012, <http://www.marketingtechblog.com/ibm-big-data-marketing/>.
- [5] McKinsey & Company (March 2015), "Marketing & sales, Bigdata, Analytics, and the Future of Marketing & Sales".
- [6] P. Zikopoulos and C. Eaton, *Understanding Bigdata: Analytics for Enterprise Class Hadoop and Streaming Data*, McGraw-Hill Osborne Media, 2011.
- [7] *The Scientific World Journal*, Volume 2014, Article ID 712826, 18 pages, <http://dx.doi.org/10.1155/2014/712826>, Review Article "Bigdata: Survey, Technologies, Opportunities, and Challenges".