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Improving Business Decisions with Data Analytics

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ABSTRACT

In today's fast-paced, highly-connected business environment, organizations must be able to utilize the huge amounts of data produced daily if they want to survive and prosper. This study delves at the ways data analytics has revolutionized decision-making for businesses across many industries. It explores the methods, techniques, and tactics of data analytics, illuminating how they have the potential to transform specific sectors. Beginning with descriptive analytics and progressing to more advanced types of predictive and prescriptive analytics, the abstract lays forth the fundamentals of data analytics. It stresses the need of extracting valuable insights from complex data utilizing cutting-edge technology such as big data processing, AI, and machine learning.

Keywords: Case Studies, Data Quality, Data Visualization, Big Data Processing, Data Analytics, Predictive Modeling, Data Analytics for Businesses, Data Privacy, Data Governance, Strategic Imperative, and Competitive Advantage.

Introduction

If data were oil, "analytics would be the 21st century's combustion engine," someone once remarked. Best regards, Sondergaard, Peter The term "big data" has been popular in the past ten years, mostly because it offers a unique chance to gather information that can boost company outcomes (Gandomi & Haider, 2015; EY.com, 2014; Kościelniak & Puto, 2015). To get an edge over their competitors, businesses are investing in big data analytics capabilities (Corea et al., 2016; Waller & Fawcett, 2013). Data analytics are making companies question "what do we know" rather than "what do we think" (McAfee & Brynjolfsson, 2012). Many industries are seeing a shift in competitiveness as a result of the increased availability of insights from big data analytics, which is challenging the status quo of traditional organizational decision-making. Incorporating data into decision-making can lead to better-informed choices, while decision-making has traditionally been marked by experts' intuition and knowledge (Anderson, 2015). According to El Houari et al. (2015), organizations may now produce knowledge in a whole new way thanks to big data. If companies can make sense of this newly created information, they can use big data analytics to their benefit now. In numerous sectors, the ability to make this change will determine who succeeds and who fails (Cukier & MayerSchoenberger, 2013; Henke et. al., 2016). Nevertheless, data analysis alone is insufficient; effective dissemination to organizational members is required for data to impact decisions, hence displacing intuition with data in decision-making (Bédier et. al., 2014). Improving decision-making hinges on timely dissemination of relevant information to the appropriate people (Schrage, 2016). Therefore, big data has a lot of potential, and many researchers have looked at how it affects decision-making; among them, McAfee and Brynjolfsson (2012) are in the forefront of the management viewpoint. There is an immediate need for additional empirical research in certain industries to address the current lack of understanding on the influence of big data analytics on decision-making.

LITERATURE REVIEW

Being able to quickly adjust to new situations is a crucial skill in today's competitive business environment. Collecting relevant data and arranging it in a usable fashion is a solid first step in this direction. The fast development of technology has made it possible for businesses to utilize all this data. A company with effective data management feeds, loads, organizes, and maintains its data in a way that benefits the company. Real data management is an important part of using IT systems so that business applications can run and users may get analytical insights to make good decisions and plans. Ensuring the secure, efficient, and profitable gathering, storage, and use of data is known as information security. To aid individuals, groups, and entities in a manner that enhances data utilization within the bounds of legislation so that they can make benefit-maximizing decisions and take benefit-maximizing actions is the ultimate goal. A strong data management strategy is becoming more important for companies as they increase their reliance on intangible assets to produce income. Many different tasks and procedures inside an organization fall under the umbrella of data management. Everything from creating and updating data from multiple data stages to storing data in different clouds and software falls under the umbrella of data management.

The data used for analytics • The data that is easily accessible • Saving private data safe and sound. In line with strategies and plans, maintain and remove records.

Data management solutions that facilitate effective data management across numerous interrelated data layers are an absolute necessity for modern organizations. Data management is a collection of procedures aimed at ensuring that data used in business agreements is correct, easily accessible, and quickly available. Business users typically lend a hand with specific tasks to ensure data satisfies their requirements and adjusts to the rules that regulate it, even though data management and IT teams perform the majority of the effort.

RESEARCH METHODOLOGY

Typically, people think of research as an effort to get more knowledge. A more technical reading is inherent in academic study. Research, to quote Clifford Woody, comprises the following stages: problem identification and reframing; hypothesis development; data collection, organization, and analysis; and, lastly, conclusion drawing to see if results corroborate hypotheses. The findings of this study are based on Wiretel's operational method. The findings of this study are based on qualitative information rather than quantitative statistics. Therefore, the most important finding would be one that evolves over time. The analysis conducted for this project is presented through visual representations that are based on the data that was collected. There will be a mix of quantitative and qualitative approaches used in the study. Secondary Source Information Used to Compile the Data:

Secondary data refers to information that has already been gathered and recorded by other researchers, but their original goal was not to solve the present study problem. Numerous sources make it available, such as books, journals, websites, reports, statistics, official documents, and organization files.

This method of data collection is easy, fast, and inexpensive. However, there is always the chance that the data wasn't meant for this specific study and isn't reliable or useful. Journals: Scholarly publications publish articles authored by researchers, academics, and other experts in a certain field. Publications primarily focus on a narrow field of study. Unlike general interest publications like newspapers and magazines, journals target only academics and professionals in a certain subject. Journals are assigned numbers according to how often they are published (monthly, quarterly, etc.). The issues that make up a volume are typically one for each year. There is a problem with having a copy. Serials and periodicals are other names for journals that share similarities with newspapers and magazines. A "magazine" is a specific kind of periodic publication that publishes a variety of articles on a regular basis (usually once a week or once a month). Most of the

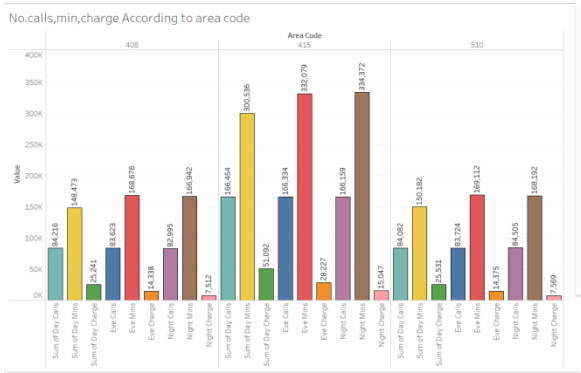
time, they get their money from prepaid subscriptions, ads, or a combination of the two. Important Notification: Important information can be conveyed to a specific audience through a bulletin, a form of mass communication.Press releases are frequently sent out by organizations and businesses to various news outlets. Since the media release is essentially a news text, its primary function is to facilitate the development of news stories. Press coverage is contingent upon the release's ability to captivate. Organizations and businesses also use bulletins as a means of internal communication to keep staff members informed of happenings within the company. Under these circumstances, it is simple to make them newsworthy. A broadcast should be concise and easy to understand so that the reader may readily learn and remember the key elements. You need to write in a formal style that is suitable for your audience and free of errors. Here, a news story style would work best, with the most important details given at the front. More information is provided in the body, and a more thorough presentation of the facts is offered in the conclusion, for example by giving background information. In case you require any further clarification, make sure to include a means for people to contact you at the end. Using a search engine is one strategy to locate specific information online. They meticulously search the Internet for particular bits of data in response to a textual web search query. A linear structure is used for search engine results pages (SERPs) when displaying the search results. Search engines scan its index whenever a user enters a query, allowing them to discover relevant web sites. The results are then presented to the user in a ranking based on relevance. The data could be presented in a variety of formats, including but not limited to: essays, infographics, photographs, videos, and links to related websites. Additional resources that some search engines comb through include public directories and databases. By running an algorithm on a web crawler, search engines maintain up-to-date information, as opposed to directories and social bookmarking sites that depend on human editors. Deep web refers to any type of online content that cannot be indexed or searched by a web search engine.

DATA ANALYSIS

This is showing the no custsev calls in each area code :-

Your table probably shows the breakdown of customer support calls by area code. Every area code has its own row, and then there should be a third column that shows how many calls came from that region. The title seemingly implies that there are "no CustSev calls," therefore it's likely that the call count column has zeros in the table. This could indicate several things: first, if all regions had faultless customer service, which would be fantastic for company. Conversely, it may show that certain areas have zero customer service initiatives.

Number of calls,min,charge according to area code:-



The location-based call patterns can be better understood by perusing this table. You may find out which areas have the highest call volume or cost as well as which areas have the highest call duration.

FINDINGS

why customers are churning from Wiretel?

Customers that have churned are more likely to have contacted customer support than those who have not, according to our previous study. This suggests that customer service could be a factor in customer attrition. Customer turnover may be influenced by factors such as pricing or service quality, as churning clients used more day and night minutes compared to non-churning customers. Further data or analysis is needed to definitively ascertain the reasons behind Wiretel customers' departure. Customer service may contribute to client churn, according to the prior study's findings. My one piece of advice for Wiretel's higher-ups would be to make improving customer service a top priority. Deploying new tools or technology, increasing customer service personnel training, or decreasing response times to consumer requests might be needed to achieve this goal. Since the data also showed that churned consumers had utilized more day and night minutes compared to non-churned customers, it is possible that variables like cost or service quality are the causes of customer turnover. That being said, Wiretel should review its services and prices to ensure they are competitive and meet the needs of their customers. Finally, conducting additional studies on possible reasons for customer attrition, such as poor network performance or the unavailability of particular products or services, may yield useful results. Tackling these issues could help Wiretel reduce customer turnover and boost customer satisfaction. Is there an improved method of customer retention based on the data that has been reviewed? In light of the foregoing, here is a retention strategy that Wiretel could implement: You should prioritize improving your customer service as it appears to be a factor in client churn based on the data. Consequently, Wiretel should put more emphasis on the quality of its customer service. Deploying new tools or technology, increasing customer service personnel training, or decreasing response times to consumer requests might be needed to achieve this goal.
2. Offer personalized plans: Wiretel should consider offering customers plans that are designed to match their unique usage habits. Plans with lower data caps could be provided to customers with lower data usage, and vice versa; for instance, clients with higher day and night minute usage could be offered plans with more minutes at a lesser cost.
3. Reward loyal clients: Wiretel may want to think about rewarding customers who have been paying their bills on time or who have been with the company for a specific amount of time with loyalty benefits. Possible perks include lower costs on service contracts, free or discounted upgrades to new gadgets, and more.

Our fourth argument is that Wiretel needs to improve the quality of its network so that it is reliable and provides good service to its customers. In order to speed up and expand the network, it may be necessary to buy additional hardware or software.
5. To gauge customer satisfaction and business performance, Wiretel should conduct surveys on a frequent basis. In order to repair things and keep customers coming back, you can use this feedback. It is possible that Wiretel might decrease customer churn and increase customer satisfaction by applying these tactics.

CONCLUSION

Data analytics-based approaches have aided companies in their journey towards automated decision-making. In order to make better and faster decisions, businesses have used a variety of data analytics approaches. Cases in point include crisis management1, demand forecasting, research of market patterns, and forecasting of product defects. Data analytics can discover hidden patterns in large datasets by utilizing Big Data and ML technologies. Businesses can improve their decision-making and processes for growth-driving business development with the use of these patterns. In order to transition to a decision-driven data analytics strategy, a corporation needs to first determine the decision-makers and the most important decisions for the organization. Then, they should seek out data with a purpose rather than trying to locate data with an inherent purpose.

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