Importance of DAaaS in Digital Marketing

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INTRODUCTION

DAaaS (Data Analytics-as-a Service) is an information provision and distribution model in which data are made available to customers over a network. DAaaS offers convenient and cost effective solutions for customer and client oriented enterprises. DAaaS is expected to facilitate new and more effective ways of distributing and processing data. DAaaS is emerging as underlying technologies that support web services and SOA (service oriented architecture).The use of the SOA, Internet and digital media and technology to support "modern marketing" has given rise to a bewildering range of labels created by both academics and professionals. It has been called digital marketing. It is the marketing of products or services using digital technologies. One of the biggest challenges of digital marketing is to mining and analyzing the valuable knowledge hidden behind the amount of data available. According to existing literature, to succeed in today's business world, industries must adopt the technologies and talent to manage big data. Big data refers to data sets that are not only big but also high in variety and velocity which makes them difficult to handle using traditional tools and techniques. IT organizations have generated, collected and stored vast amounts of data and now, IT is being asked to provide the infrastructure to perform analytics on this data. But this task is a resource intensive proposition and is being solved by cloud technology in the form of DAaaS. DAaaS (Data Analytics-as-a Service) is an extensible platform that uses a cloud based delivery model. It is the delivery of statistical analysis tools or information by an outside provider that helps organizations to understand and use insights gained from their large amounts of data in order to achieve a competitive advantage. DAaaS represents the approach to an extensible platform that can provide cloud based analytical capabilities over a variety of industries and use cases. From a functional perspective, the platform that covers the end-to-end capabilities of an analytical solution from data acquisition to end-user's visualization, reporting and interaction. Benefits of DaaS include the ability to move data easily from one platform to another, avoidance of the confusion and conflict that can occur when multiple "versions" of the same data exist in different locations, outsourcing of the presentation layer, reducing overall cost of data maintenance

and delivery, preservation of data integrity by implementing access control measures, compatibility among diverse platforms, global accessibility and automatic updates.

WHAT IS DIGITAL MARKETING

Digital marketing is the marketing of products or services using digital technologies, mainly on the Internet, but also including mobile phones, display advertising, and any other digital medium.

Digital marketing's development since the 1990s and 2000s has changed the way brands and businesses use technology for marketing. As digital platforms are increasingly incorporated into marketing plans and everyday life, and as people use digital devices instead of visiting physical shops, digital marketing campaigns are becoming more prevalent and efficient.

The 5Ds define the opportunities for consumers to interact with brands and for businesses to reach and learn from their audiences in different ways:

1. **Digital devices** – audiences experience brands as they interact with business websites and mobile apps typically through a combination of connected devices including smartphones, tablets, desktop computers, TVs and gaming devices.

2. **Digital platforms** – most interactions on these devices are through a browser or apps from the major platforms or services, that's Facebook (and Instagram), Google (and YouTube), Twitter and LinkedIn.

3. **Digital media** – different paid, owned and earned communications channels for reaching and engaging audiences including advertising email and messaging, search engines and social networks.

4. **Digital data** – the insight businesses collect about their audience profiles and their interactions with businesses, which now need to be protected by law in most countries.

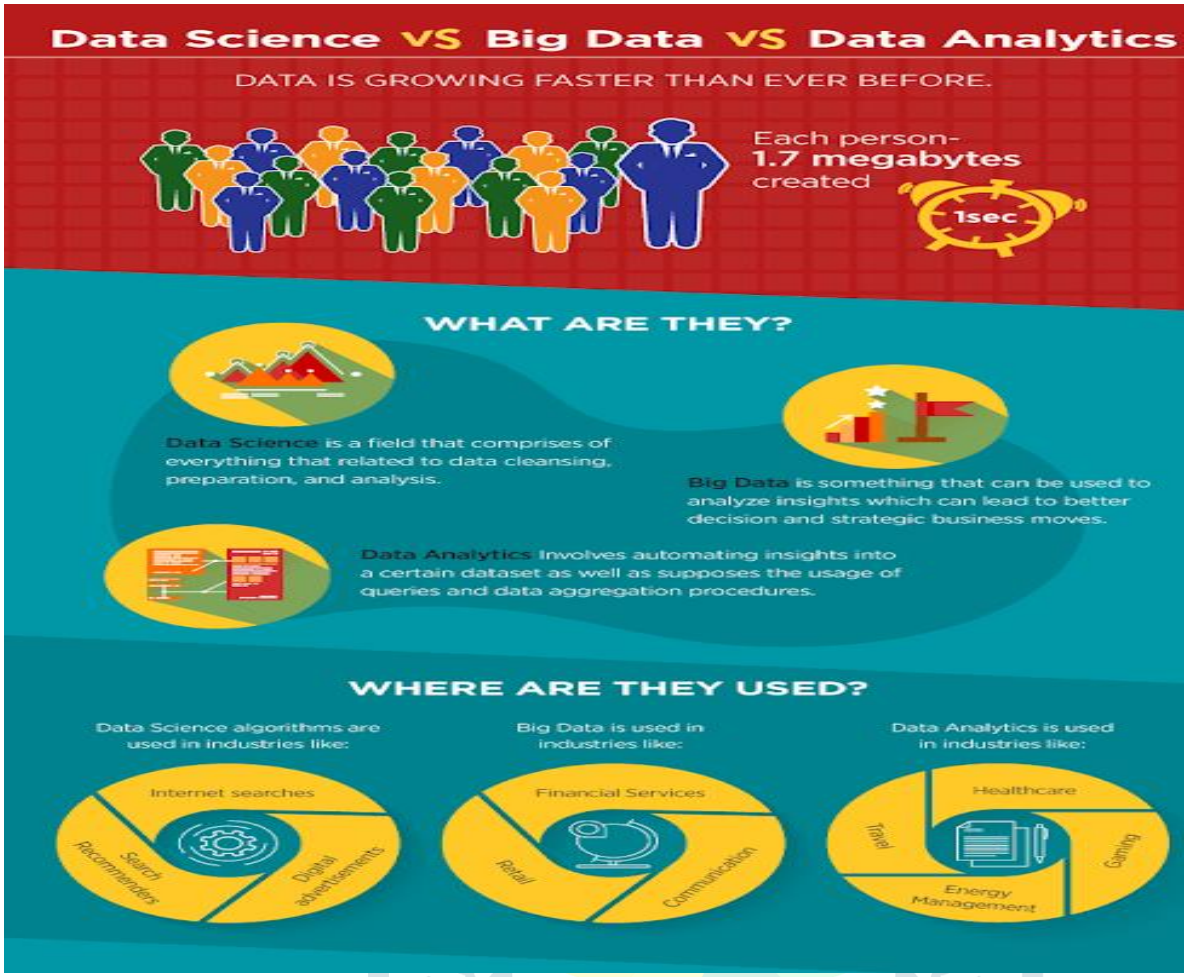
5. **Digital technology** – the marketing technology or martech stack that businesses use to create interactive experiences from websites and mobile apps to in-store kiosks and email campaigns.

IMPORTANT "D": DATA

Data is everywhere. In fact, the amount of digital data that exists is growing at a rapid rate, doubling every two years, and changing the way we live. According to IBM, 2.5 billion gigabytes (GB) of data was generated every day in 2012.

An article by Forbes states that Data is growing faster than ever before and by the year 2020, about 1.7 megabytes of new information will be created every second for every human being on the planet.

Which makes it extremely important to at least know the basics of the field? After all, here is where our future lies.



Data Science: Dealing with unstructured and structured data, Data Science is a field that comprises of everything that related to data cleansing, preparation, and analysis.

Data Science is the combination of statistics, mathematics, programming, problem-solving, capturing data in ingenious ways, the ability to look at things differently, and the activity of cleansing, preparing and aligning the data.

In simple terms, it is the umbrella of techniques used when trying to extract insights and information from data

Big Data: Big Data refers to humongous volumes of data that cannot be processed effectively with the traditional applications that exist. The processing of Big Data begins with the raw data that isn't aggregated and is most often impossible to store in the memory of a single computer.

A buzzword that is used to describe immense volumes of data, both unstructured and structured, Big Data inundates a business on a day-to-day basis. Big Data is something that can be used to analyse insights which can lead to better decisions and strategic business moves.

The definition of Big Data, given by Gartner is, "Big data is high-volume, and high-velocity and/or high-variety information assets that demand cost-effective, innovative forms of information processing that enable enhanced insight, decision making, and process automation".

Data Analytics: Data Analytics the science of examining raw data with the purpose of drawing conclusions about that information.

Data Analytics involves applying an algorithmic or mechanical process to derive insights. For example, running through a number of data sets to look for meaningful correlations between each other.

It is used in a number of industries to allow the organizations and companies to make better decisions as well as verify and disprove existing theories or models.

The focus of Data Analytics lies in inference, which is the process of deriving conclusions that are solely based on what the researcher already knows.

Applications of Data Science:

- Internet search: Search engines make use of data science algorithms to deliver best results for search queries in a fraction of seconds.
- Digital Advertisements: The entire digital marketing spectrum uses the data science algorithms - from display banners to digital billboards. This is the mean reason for digital ads getting higher CTR than traditional advertisements.
- Recommender systems: The recommender systems not only make it easy to find relevant products from billions of products available but also add a lot to user-experience. A lot of companies use this system to promote their products and suggestions in accordance with the user's demands and relevance of information. The recommendations are based on the user's previous search results.

Applications of Big Data:

- Big Data for financial services: Credit card companies, retail banks, private wealth management advisories, insurance firms, venture funds, and institutional investment banks use big data for their financial services. The common problem among them all is the massive amounts of multi-structured data living in multiple disparate systems which can be solved by big data. Thus big data is used in a number of ways like:
    - Customer analytics
    - Compliance analytics
    - Fraud analytics
    - Operational analytics
- Big Data in communications: Gaining new subscribers, retaining customers, and expanding within current subscriber bases are top priorities for telecommunication service providers. The solutions to these challenges lie in the ability to combine and analyse the masses of customer-generated data and machine-generated data that is being created every day.

- Big Data for Retail: Brick and Mortar or an online e-trailer, the answer to staying the game and being competitive understands the customer better to serve them. This requires the ability to analyse all the disparate data sources that companies deal with every day, including the weblogs, customer transaction data, social media, store-branded credit card data, and loyalty program data.

Applications of Data Analysis:

- Healthcare: The main challenge for hospitals with cost pressures tightens is to treat as many patients as they can efficiently, keeping in mind the improvement of the quality of care. Instrument and machine data is being used increasingly to track as well as optimize patient flow, treatment, and equipment used in the hospitals. It is estimated that there will be a 1% efficiency gain that could yield more than $63 billion in the global healthcare savings.

- Travel: Data analytics is able to optimize the buying experience through the mobile/ weblog and the social media data analysis. Travel sights can gain insights into the customer's desires and preferences. Products can be up-sold by correlating the current sales to the subsequent browsing increase browse-to-buy conversions via customized packages and offers. Personalized travel recommendations can also be delivered by data analytics based on social media data.

- Gaming: Data Analytics helps in collecting data to optimize and spend within as well as across games. Game companies gain insight into the dislikes, the relationships, and the likes of the users.

- Energy Management: Most firms are using data analytics for energy management, including smart-grid management, energy optimization, energy distribution, and building automation in utility companies. The application here is centred on the controlling and monitoring of network devices, dispatch crews, and manage service outages. Utilities are given the ability to integrate millions of data points in the network performance and lets the engineers use the analytics to monitor the network.

WHAT IS DATA ANALYSIS

Data analytics (DA) is the process of examining data sets in order to draw conclusions about the information they contain, increasingly with the aid of specialized systems and software. Data analytics technologies and techniques are widely used in commercial industries to enable organizations to make more-informed business decisions and by scientists and researchers to verify or disprove scientific models, theories and hypotheses.

As a term, data analytics predominantly refers to an assortment of applications, from basic business intelligence (BI), reporting and online analytical processing (OLAP) to various forms of advanced analytics.

Category:

Data analytics can also be separated into quantitative data analysis and qualitative data analysis. The former involves analysis of numerical data with quantifiable variables that can be compared or measured statistically. The qualitative approach is more interpretive -- it focuses on understanding the content of non-numerical data like text, images, audio and video, including common phrases, themes and points of view.

More advanced types of data analytics include data mining, which involves sorting through large data sets to identify trends, patterns and relationships; predictive analytics, which seeks to predict customer behavior, equipment failures and other future events; and machine learning, an artificial intelligence technique that

uses automated algorithms to churn through data sets more quickly than data scientists can do via conventional analytical modeling. Big data analytics applies data mining, predictive analytics and machine learning tools to sets of big data that often contain unstructured and semi-structured data. Text mining provides a means of analyzing documents, emails and other text-based content.

WHAT IS DATA ANALYTICS-as-a SERVICE

DAaaS (Data Analytics-as-a Service) is an information provision and distribution model in which data are made available to customers over a network. DAaaS offers convenient and cost effective solutions for customer and client oriented enterprises. DAaaS is expected to facilitate new and more effective ways of distributing and processing data. DAaaS is emerging as underlying technologies that support web services and SOA (service oriented architecture).It provides a selection of tool that are available for Data Analytics that can be configured by the user to efficiently process huge quantities of data. Customers will feed enterprise data into the platform, this data can be processed by analytics applications which can provide business insight using analytical algorithms and machine learning.

Key benefits:-

- Enables small to mid-size organization to have the same capabilities as larger organizations
- More cost effective to business as it prevents the need for costly upfront capital costs
- Allows users to focus on exploring and analyzing data, a high-value activity.

CONCLUSION

Each business will have different data requirements, but by adopting a DAaaS solution it will provide a platform to allow you to ingest diverse data for both unstructured and traditional data sources, extending the analytical capability of your business using a subscription payment model. The platform can scale as the business grows. Empowering users to make more productive and profitable decisions. DAaaS represents the approach to an extensible platform that can provide cloud based analytical capabilities over a variety of industries and use cases. From a functional perspective, the platform that covers the end-to-end capabilities of an analytical solution from data acquisition to end-user's visualization, reporting and interaction. Benefits of DaaS include the ability to move data easily from one platform to another, avoidance of the confusion and conflict that can occur when multiple "versions" of the same data exist in different locations, outsourcing of the presentation layer, reducing overall cost of data maintenance and delivery, preservation of data integrity by implementing access control measures, compatibility among diverse platforms, global accessibility and automatic updates.

REFERENCE

Facts and figures represented are are collected from various sources available on internet. It may be ambiguous.