Impact of the big data technology stack in digital marketing performance

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Digital marketing is one of the most technology consuming paradigm in successiveness in marketing world using various type of marketing platforms that are used to achieve various scenarios like achieving social concurrency using rich media contents, personalization of consumers, email marketing, real-time marketing and more. Achievement of this phenomenon has been formed through monitoring behavioral patterns and profiling of consumers, web analytics (measuring engagements, adoption, and retention), elastic server storages, real-time processing, predictive analysis, reporting, Artificial Intelligence (AI) and more digital objects. The corresponding digital objects possess some decision factors that influence the performances itself identified as handling huge volumes of data, range of data modeling, data integration concession, supporting algorithmic queries, real-time support, amount of administration overload, uptime load without disruption in the view of the technical level. Those factors are not constant in providing feasible approaches to come across various marketing strategies. Therefore, depend on a single underlying platform is rarely found in enterprises utilization which makes it difficult for the extensity in marketing processes to expand on the existing system. More marketing features denotes the higher dimensionality of data collections through dynamic streams for storage that is a matter in the integration of data, hence identifying the cardinality of a unique data set in clustering is difficult in reporting and analyzing to acquire detailed-by-customer level knowledge. When considering the bias between access paths in structured (modeled) and unstructured data in a large variety of data itself is critical which make it difficult to grasp features for further processing. When integration of data for storage, the nature of streaming data had made it difficult to join the streams in summation in performing the optimized queries on data to make them more structured. In the analytics perspective of view, the cause of complex process in analytics has driven the difficulty in user-friendly visualization and understanding of lower level results for the data scientists. The foresight of the domain can uplift by the effective use of unstructured data in real-time personalization that has the higher noise of interferences in storages that compound to pull off relevant data from a larger sink of unstructured collections for further real-time personalization. Since the objective is to improve the performance of the underlying system of extending features, the above areas are being focused to be improved. At a broader level of view, it is intended to achieve the above range of issues through an architectural model of big data technology stack. The techniques to overcome the challenges should be found before the design. The methodology is designed as mapping the lower level requirements and overlapped functionalities of identified marketing scenarios in modeled stack prioritizing key decision factors followed with the assembling the techniques found or implemented for the defined areas of challenges.

Keywords: Analytics, clustering method, digital marketing, technology stack