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Decision management

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Abstract

The phrase decision management can also be expressed as being an enterprise decision management or EDM or that of BDM or business decision management. This will be encompassing any aspects in relation to that of management, building and designing of systems which take decisions in an automated way. These are often used by organisations to be managing the kind of interactions they have with their suppliers, employees and customers. Computing or computerisation has been changing the ways in which organisations are bound to be making decisions. More and more decisions are being made in an automated way.

1. Introduction

The automated decisions being made make sure that response times are well-handled along with that of the operation that is unattended by that of computerisation. This process encompasses the enabling of decisions that are based on the information and the decisions being based on the analysis of prior decisions, behavioural data along with their outcomes which are historical (1). The management of decisions has been described as the emergence of important discipline because of an increase in the need of automated decisions in tremendous volumes all across enterprises which will be imparting consistency, precision along with the agility in the process of making decisions. The process is largely based on the implementation of decision management by the usage of systems which are rule-based and analytic models for the enabling of automated, high-volume decision-making (2). Companies are trying to improve the kind of value that is created through their decisions by the deployment of software solutions which is generally developed by the usage of technology of predictive analysis or BRMs. They are using these tactics to manage the tradeoffs better between that of accuracy or precision, agility, consistency, decision latency or that of speed along with the decision making costs within the company (3).

2. DISCUSSION

There is a concept of yielding of decisions for example, which focuses on all 5 of the key factors involved in the making of decisions that is decisions that are more targeted or precise. This can also be done multiple times and a million times over in the same way maintaining consistency (4). The techniques also have to be fruitful while adapting to the on-the-fly agility of the business in regards to an organisation by the improvement of speed and reduction in cost. This is the overall metric in the case of an organisation being able to make a decision efficiently. The companies in the meantime have made significant advances in the adoption of the technology of decision management and its approaches since they are in constant need for higher returns from erstwhile investments in infrastructure. The organisations face increasingly more different ways of complexities in making business decisions. They are also facing competitive pressures for making decisions that are increasingly more sophisticated since there are increasingly shorter windows for that of a competitive advantage which means that the speed with which business is done has outpaced the speed of technology of the information to be reacting.

The management of decisions can be changing in how an organisation is able to be running their own business. As of today, one can very well say that most of the operations of businesses are centred around data and processes (5). As and when the knowledge, predictive analytics and expertise is being considered, each of these concepts is being shoehorned into data or process definition. This creates bottlenecks in processes along with that of systems which are inflexible or hard-coded. The process or processes of management of decisions is used for the streamlining and improvement of items of actions. The aim of decision-making and its management is for the improvement of the process of making decisions by the usage of all kinds of information that is available so as to bring an increase in precision. The management of decisions and their systems can be treating a decision as something that is reusable

along with the introduction of technology at the point of decisions in order to automate the process of decision making. The decisions can be fully taken in an automated way or they could be presented as choices that are possible to be made by that of a human.

More and more of organisations that can deal with financial services, insurance and banking have been integrating the software of decision-making into the processes of business and their systems along with their applications which are consumer-facing. This is the kind of approach that is especially beneficial for that of higher volumes of the decision-making since automation of the decisions may be able to enable a more efficient, consistent and information-based response to that of an event (6). IBM's Watson who is a stalwart in this aspect of technology has myriad elements which are interesting and also relevant to the people who work with analytics, decision management etc. The linkage is however not as direct as to how one may expect to be. One must be first remembering that the company IBM which has been listed as an example is not part of the range of companies who have listed their predictive analytics technology better known as that of SPSS. They have also not listed their ILOG or technology of optimisation. ILOG also means business rules. The solutions for the company as per Watson comes from the stack of solutions and focuses more on hardware using which they run along with the natural or rather unnatural processing of languages for the figuring out of questions.

There are many lessons that are also critical and have been propagated by IBM's Watson. He has used many myriad techniques for the assessment of the evidence along with the data that they have. It is seen to be analogous to that of the usages of ensemble models within that of analytics (7). Ensemble models are the combination of the analytic predictions in regards to multitudes of techniques for the creation of an ensemble model which is further accurate from that of the pieces of components. This has been seen to have increased widely as the best analytic practices like the way Dean Abbott has discussed in his webinar in collaboration with another author. The predictions and their confidence are what is the key to the success of Watson. It is able to be calculating the confidence in multiple answers by using the information provided and forming an answer of its own. Predictive analytics and its aim are to turn the uncertainty of the future into probabilities that are usable. It, therefore, is always useful to be understanding that people are confident up to what level in regards to a prediction before one may be usingit.

Of course, one of the million reasons for the using of management of business rules is to be implementing analytics so that it may be allowing one to be selectively implementing just those few elements in a decision tree for example where someone is suitably confident. Watson has made it easier for things to be demonstrated while being based in real-time even if the problems are too complex (8). The time when analytics would just be applied in batches or by the scoring of databases overnight is a thing of the past. Businesses are now thinking of scoring real-time with their data that they can gather at the decision-making point and not compromise in any way with that. The problems of an organisation can be way simpler than that of Watson so they will not be needing things equivalent to that of the kinds of hardware that was seen to be involved before. It has however been seen that incremental improvement in the due course of time can be tricky yet critical. However the best thing about that of analytics mainly the one which is applied to that of a decision one tends to be making a lot of times is something that can be allowing one to be testing out newer approaches.

One may also learn from them while accumulating data in regards to what can work and what may not in order to stay a step ahead of people in the industry. The mindset of continuous improvement is what is needed in the applications regarding analytics to that of systems of operation (9). On a final note, there are people who may be saying since analytics are not correct cent per cent of the time and also the future is not one hundred per cent predictable the analytics which is predictive may not be utilised. If one comes up with analytic decisions which are better than a human coming up with the same 66.66 per cent of the time then it is something to be appreciated. There are scientists of decision such as that of Tom Wilger. He says that it hugely depends on the kinds of people he spends his time along with the kinds of tools they can bring that help in the solving of problems. People while discussing decision management have often limited the scope of their problems that is to be included in the discipline. There are many people who work under the BRMS space or the Business Rule Management System and Tom has noticed that when is working with the same people they will include businessrules with that of Decision Management.

There are multiple terminologies to be used and they include the intelligent process automation wherein the management of decisions are being combined with that of the process of business management. There are multiple approaches that may be utilised to be applying the principles of decision management (10). The following three steps are usually followed. The first step is the identification of decisions along with the modelling of decisions by the usage of standards which are more open like the Decision Model and Notation along with that of proprietary approaches like The Decision Model. The developing of the systems or services have often been known as a Decision Service which can automate part or all of the decisions. There is also a process of monitoring which is ongoing along with that of management of decisions to be keeping the rules of the business along with the predictive analytics models being used and updated. The management of decisions has often involved the usage of A/B tests along with experimenting as well.

It can be true that many such problems may be able to be solved by using rules of businesses or they may be requiring other techniques along with that of rules of businesses. There can be many problems on the basis of decision management, for instance, deterministic information can be based on the kinds of data which one may be known about or at least they may be able to assume its value (11). This type of data can be as simple as someone's age who has applied for the policy of insurance or the total quantity of products that one needs in order to be produced while there is a production run within the factory. The information which is stochastic can be based on that of the data which one does not know for sure for instance the highest temperature for the nest day in random places like New Mexico, Wyoming etc (12). It may also be the closing price of that of Exxon stocks for the week after the present one. Overall decision management has proved to be one of the greatest tool in organization, as there are higher chances for risk associated in a company and hence the risk management is important to be managed (13). Further, the use of advanced tools based information science for instance artificial intelligence has always help to create more smooth processing in organization (14).

3. CONCLUSION

The management of decisions has been proved as an approach that can help in the scaling and adoption of special capabilities of rules of businesses along with that of predictive analytics which is an essential part for the leveraging of big data along with the meeting of the needs of operational requirements along with user expectations of today. The aim is to also bring more consistency and agility into decisions by making a smart choice which involves taking known risks keeping a timeline or a deadline in mind. The management of decisions can be using tools that include rules of businesses, BI or business intelligence, Kaizen or the system of continuous improvement, AI that is artificial intelligence along with analytics that is more or less predictive.

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