Summarization of Key Papers

Customer Analytics Matter?

In current times it has been observed that there is an improving trend in inclination of Businesses towards Customer analytics, however the McKinsey survey shows the reverse despite of increased investments and spendings over the period. Significant impact of Customer Analytics is observed in the corporate sector due to its performance impact and effective efficiency but is not given enough importance as compared to other areas of Marketing and Sales. Companies using Customer Analytics have been reported better on their key performance metrics, outperforming competitors' profit, sales and growth.

As per findings, some aspects that could improve Customer Analytics further are:

Prioritizing Excellence over good average: Extensive users of Customer Analytics claim significant value contributions, but its impact may be limited for beginners or moderate users and require higher level maturity at analytics applications. Companies should compare their Customer Analytics to other industry leaders to ensure worthwhile investments.

Establishing an organizational culture that values the fact-based decision making based on Customer Analytics along with focusing on IT & analytics. With a holistic approach, having right organizational structure, cultural foundation mindset and making fact-based decisions are more crucial than just how things are put into action or how quick the insights are formed.

Involvement of senior management with background in Data has significant impact on the customer analytics with 69% showing positive results. Organizational setups that prioritize customer centric mindset in overall approach reap benefits of Customer Analytics.

Organizations should start to evaluate themselves against the competitors on various factors like customer analytics expertise, how fact-based decisions are etc. It is absolute necessity to set such benchmark insights that will be helpful to analyze their current performance and take Customer analytics to next level.

How to tell if Machine Learning can solve your business problems

Understand nature of problem: With the ongoing trend of automation in every box of life, it is critical to differentiate between Automation problems and Learning problems. Most of the business concerns might just require automation and not learning; just to transform work done by humans into work being done by machines. For instance, Inventory Software can track and maintain the stock levels and Payroll management software that helps to manage employee data, salary, and tax computations. Such business problems can be dealt without need of machine learning. However, if there is need of Inventory Optimization, machine learning can be used to analyze historic data for forecasting demands and seasonality for better efficiency. Consider a new private university being set up in the State: using machine learning to predict admission rate as per other state universities around is a preferred case, but predicting annual revenue or profits using ML is not preferrable. Henceforth automation with ML here can help the university in strategic resource planning and operations planning. But since Universities have different revenue sources starting from tuition fees, government funding and grants and their primary motive is to provide education and research so predicting sales/profits is not appropriate.

Review Data scope and quality: Having the required and sufficient quality data is essential. If it is obtained from external sources, does it solve the purpose or fits the objective of our ML model.

Intuition check: Does the various implications of statistical methods or machine learning justify the problem prospects, if yes then to what extent. Are these appropriate to the complexity and nature of the problem. Does the chosen algorithm or model align with the problem with efficiency?

Scope of Error analysis: Even with the pre-requisite steps followed where business problem is identified, checked for suitability with ML modeling, analyzing scope of provided data; yet there are chances of error! Is that tradeoff between resulting Error and Model fitting acceptable? ML models are built on training sets

that could be sample data and when tested with population data it could give drastic different outputs. Sometimes it could be the live streaming data that may cause variations in the outputs and causing Errors in the modeling. The scope of error tolerance by the business in upcoming future is to be evaluated in advance too. If there are some types of errors that are unacceptable to the business context and have consequences later, it is crucial to review the whole process of implementing a certain ML modelling.

Pricing and Promotions: The Analytics Opportunity

The trade-off between raising an item's price to increase revenue and lowering prices or offering discounts to draw in more customers has long been the subject of a universal struggle. We continually adjust the parameters to optimize Revenue overall through an iterative process. Profit and revenue statistics analysis aids in the optimization of pricing, promotions, and customer loyalty initiatives. Linking Pricing and Promotions with Advanced Analytics is a three-step approach.

1.***Considering a variety of variables to ascertain price sensitivity:*** According to the Price-Sensitivity score, pricing should be strategic. Each product's price elasticity can be computed by combining its unique input elements, and the results can be divided into three categories: Key Value items (Top Sensitive): Consumers are aware of everyday supermarket goods, and price changes may have an impact on their loyalty. They must have of substantial value to attract customers who visit more frequently and make larger baskets, as they make up 10–20% of the stores' sales. Foreground items (midlevel security): These are goods that are crucial to consumers regardless of price fluctuations. Therefore, to avoid negatively affecting the clients, their rates should be set within a range in relation to their competitors so that it doesn't affect Retailers adversely. Low sensitivity background items are those that are either not important for customers or for which price comparison won't be possible. These offer the most flexibility in terms of adjusting the product costs.

2. ***Setting Promotional Targets in Order of Priority:*** Using Promotional Affinity Scores, retailers can assess the effectiveness of their promotional tactics in terms of profit and sales. The five factors—the likelihood that a customer will purchase a product without a promotion, the number of transactions that will increase as a result of discounts, the volume of the promoted product that will be purchased, the variation in the products in the customer's basket, and any changes in the customer's purchasing behavior—allow them to fine-tune their strategies. They must comprehend each key performance indicator (KPI) and use "total customer effect (TCE)" as a cumulative metric to evaluate the effectiveness of promotions in order to navigate promotional campaigns effectively.

3. ***Linking Prices to Promotions:*** To optimize best, businesses categorize their product line into four groups according to "promotion affinity" and "price sensitivity" using a price-promotion matrix.

High price sensitivity and high promotion affinity: ensuring low prices and maximum discounts to promote large baskets and frequent purchases.

High price sensitivity and low promotion affinity: To maintain the pricing of essentials between recommended and promotional (discounted) prices.

Low price sensitivity and high promotion affinity*:* Maintaining price parity with the top rival while offering promotional discounts for occasional or rare purchases.

Low price sensitivity and low promotion affinity: By raising the profit margins, these products gain additional value. Maintaining competitive pricing with no or minimal discounts.

Integrating price and promotion management requires three key areas: Strategy and execution: Marketing departments will collaborate to determine regional pricing and promotions and distribute the plan across networks. Data and Resource: When a process is spread throughout a growing network, transactional data must be evaluated and analyzed. Culture and mindset: The department, employees, and other stakeholders must be included to successfully adopt and implement new initiatives and build a collective attitude among stakeholders.

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