AI in Marketing
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Week 3
Lecture-12 Using AI for STP

Welcome to this NPTEL online certification course on Artificial Intelligence and Marketing. And now we will talk about module 12. So, in this module, we will see how AI can be used for segmentation, targeting and positioning. So, this is chapter 2, and we are talking about module 12 that is using AI for STP. Now let us look at what are the topics that will be covered in this module. So, we will start with understanding the emerging use of AI in strategic marketing. Then we will explore how marketers can leverage AI for segmentation, targeting and positioning. Thereafter we will understand the capabilities of various types of AI for STP. Study how companies are actually using AI for STP and explore the future of AI in STP.

Now let us see how AI is being used for STP. So, look at this figure, that is the figure 1 and this is the value delivery process. So, here we have the value creation and delivery process. The first is choose value, provide value, and communicate value. So these are the the 3 components of value creation and delivery process. How to choose value? So, you have to do market customer segmentation, market selection and focus and value positioning. Then, how to provide value? Product development, service development, pricing, sourcing or making or distributing and servicing. How to communicate the value? By way of sales force, sales promotion, advertising and how they combine together for achieving these objectives.

So, we are starting with choosing the value that is strategic marketing. So AI can be used for the strategic decisions of segmentation, targeting and positioning. Specifically different types of AI can be used for different types of decisions. For instance, mechanical AI is ideal for discovering novel customer preference patterns in unstructured data. Thinking AI is ideal for recommending the best segments to the target and feeling AI is ideal for communicating with the targeted customers about the product. So, these are the 3 types of AIs. However, before proceeding to specific STP decisions, marketers need to decide the overall strategic positioning to guide their STP decisions. A technological driven approach to positioning forms a strategy along the dimensions of standardization-personalization. So, that is a continuum. Standardization, and personalization. Standardization and personalization. And transaction and relationship has been proposed. This is another continuum.

Commodity strategy that uses automated robotic technology for efficiency. A relational strategy that cultivates the existing customer lifetime value. A static personalization strategy that uses cross-sectional big data analytics. For example, like-minded customers for personalization or an adapted personalization strategy that uses longitudinal customer data for dynamic personalization over time.

The strategic positioning will guide firms' STP decisions. For example, if a firm pursues the static personalization strategy, the firm may want to have a big, relevant, existing and potential customer database and let unsupervised machine learning explore patterns of preference or purchase behavior as the basis of targeting and positioning. If the firm pursues the adapted personalization strategy, so here we are talking of static personalization and here we are talking of adapted personalization. The firm may want to use supervised machine learning to continue analyzing existing customer satisfaction and dissatisfaction over time, which may not be big. However, if the firms embrace a data-driven approach to STP, it can rely more heavily on AI to explore the STP possibilities.

In general, this stage of strategic decisions relies more on thinking AI for its capability of processing data to arrive at new conclusions or decisions. However, it is worth reiterating that the assignment of some applications to a particular intelligence is mainly based on the purpose an application is used for. For example, when thinking AI becomes completely routinized. As in the case of segmentation applications, it shares many of the characteristics of mechanical AI. So, now you see that thinking AI is becoming mechanical. Because it simply identifies patterns from data routinely and repetitively without involving much about the purpose of making new decisions that is segmentation but not retargeting.

In this section, we will discuss the use of AI in strategic marketing planned development, how AI can be used for the strategic decisions of segmentation, targeting and positioning. Other topics such as providing, communicating, and delivering value using AI would be discussed in later chapters. Now, different types of AIs that we have talked about earlier, mechanical thinking and feeling could be used for different decisions such as recommending the best segments to target, communicating with the targeted customers about the product.

So, these are the strategic decisions, AI intelligence. So, now we are talking of a segmentation marketing strategy that is STP. Mechanical AI, thinking AI and feeling AI. Mechanical AI is being used for segmentation that is using mechanical AI to identify novel customer preference pattern. Thinking AI is used for targeting using thinking AI to recommend the best target segments. While feeling AI positioning is used for positioning, using feeling AI to develop positioning that resonates with the customers. So, this is how you see that AI is used for segmentation, targeting and positioning.

Now, let us look at the segmentation. Segmentation is to slice a market into pieces with customers in each piece having unique needs and wants. For example, using gender to slice the shoe market into male and female shoe segments and using price and quality to slice the air travel market into budget and premium airlines. So, now you see that now here we are using gender to slice and here we are using price and quality to slice. The current approach relies on the marketer's intuition and domain knowledge to choose a limited number of segmentation variables such as demographics, psychographics and behavioral variables. Such an approach sees customers as aggregates and not as individuals and that is the problem. For example, some customer equity models focus on segmenting customers based on their acquisition and churn rates and do not see them as individually unique. Generic user personas thus are often applied to these segments to help marketers make the aggregate segments more personal and relatable. By contrast, AI segmentation is flexible and allows marketers to find the right size of the segment. AI segmentation can disaggregate the market into segments of one. Each individual customer is a segment and can aggregate scattered long tails into one segment.

Mechanical AI, especially the various mining and grouping techniques, have the strength to identify novel patterns from the data. Data mining can be used to uncover patterns that are difficult for human marketers to see. For example, text mining and machine learning can be used to automatically process and analyze loan requests to slice borrowers into good customers and into bad customers. Automated text analysis and correspondence analysis can be used for psychographic consumer segmentation in the art market. Data mining can be used to obtain tourist segments based on the meaning of destinations to consumers that is better than the classical clustering methods. Retail customers can be micro segmented based on their preferences for personalized recommendations. So, now we are talking of these micro segments.

Further, it no longer requires marketers to decide the segmentation variable on an a priori basis because unsupervised machine learning can discover the patterns itself. A virtually unlimited number of variables can be used to slice the market in a novel way that often goes beyond any pattern that human marketers can see. So, that is the power that we are looking at. In the book, Championing Statistical Methods for Market Segmentation, Gray and Willis set the stage for machines to do the work faster, cheaper, and better.

IDC's white paper, Machine Learning Will Revolutionize Market Segmentation Practice describes how AI can generate market segments. Machine learning delivers personal profiles into segmentation buckets which can be predefined or automatically machine generated. Dynamic market segments are then sized and prioritized based on the untapped incremental revenue opportunity. However, this capability is not limited to predefined segments. As machine learning can also slice and dice customer data sets to identify potential new segments of customers who are under monetized relative to their peers. For example, machine learning might identify how the behavior of a region or

country varies from the global norms and require a specific product assortment and pricing mix. Or perhaps time-based variations that show that late night shoppers have a propensity to abandon a cart. Creating a bucket of prospects who look like your best customers is a fine old tradition. Adobe's Target Premium is one of the many tools designed to do just that. Find your best customers, point your machine at them and let it work out what they have in common so that you can go find more like them.

Adobe's Target goes a couple of steps further. Target aggregate customers' data from a variety of online and offline sources including web and app analytics, customer relationship management databases, internal phasing enterprise resource planning and data warehousing systems. As you surface this data, Target's machine learning algorithms determine which variables are most predictive of conversion, eliminating clutter from your customer profiles. And Target integration with audience manager means you can leverage lookalike modeling to automatically find new customer segments, expanding your audience in unexpected directions.

Next comes targeting. Targeting is choosing the right segments on which to focus the firm's marketing activities. Slicing the market is more mechanical and can be done automatically by mechanical AI given the relevant data. However, choosing the right segment requires domain knowledge, judgment and intuition. Various technologies and analytics have been used for targeting such as search engines using keyword searched and browsing history to target such customers, social media platforms using interest content connections to target social media consumers. The representative AI for this decision is the recommendation search engine that can recommend various potential targets for marketing manager's final verdict and predictive modeling that can be used to choose which segments to target. Various thinking AI can be used for this purpose. Examples include targeting customers using a combination of statistical and data mining techniques, screening and targeting cancer outreach marketing using machine learning and causal forests, optimizing promotion targeting for new customers using various machine learning methods, identifying the best targets for proactive churn program from field experimental data using machine learning techniques and profiling digital consumers for targeting using online browsing data. Currently targeting mostly uses marketers' subjective judgment based on the resources, the competitive advantage of the firm and the value of the segment to the firm. So, these are the three criteria that we currently use for choosing a segment to target.

It is typically at the segment level not individual level and often rates of segment size for effectiveness. By contrast after very refined segmentation, it is thinking AI's turn to recommend the best segments to target. It is very well likely to be a segment of one since personalization is the strength of thinking AI. With the capability to slice the market in unlimited ways and at the individual customer level targeting in emerging practice is more commonly at the individual customer level. So now we are targeting the individual

customer. For example, online ads use cookies to target individual customers by following them around wherever they go on the internet.

The new targeting also is flexible because it can aggregate individual customers into a segment if they have similar preferences. For example, like minded customer recommendations aggregating long tail customers even when each individual customer may not be valuable. Or it can desegregate a segment if heterogeneity within the segment becomes manifest. So, we are talking of segments that are homogeneous but over time they may become heterogeneous. Now how much time that is? Targeting involves not just identifying segments but also determining whether they should be pursued. Whether they should be pursued or not is a matter of predicting the outcome. If they pursue and predictions at the individual level is only scalable with the help of AI.

The next comes positioning. Positioning bridges product attributes and customer benefits by finding a competitively advantageous position for the product in the customer's mind. So, it bridges product attributes 1 and customer benefits. It integrates them by finding a competitively advantageous position for the product in the customer's mind. So, this integration should lead to an advantageous position in the consumer mind. This term is often associated with brand positioning or advertising positioning for its association with customer perceptions and communication to maintain a desirable perception.

Positioning is currently a human task for because it involves judgment, intuition and creativity that machines are not particularly good at. Creativity is not just about novelty but also about social acceptability. So, this creativity has two components. One is novelty and another is social acceptability. A novel idea has to be accepted by the community to be deemed as creative. The idea may be novel but not socially acceptable. So that is useless. Because creativity is socially embedded, a good positioning is in the eye of the target customers. Compared with the mechanical based segmentation and thinking based targeting, positioning is more about speaking to customers hearts, typically as a positioning statement or slogan in promotional communication. Tourism positioning slogans in top destinations tends to emphasize the affective component.

Some successful positioning statements help brands to occupy a unique position in the minds, in the customer's mind and thus succeed in the market for a long time. For example, Nike's just do it. Apple computers- be different. McDonald- I am loving it. All these communicates with the customer by speaking to their hearts.

Feeling AI such as feeling analytics is ideal for this strategic decision to help develop compelling slogans by understanding what resonates with the target customers. So, this is where to some extent this feeling AI can be used to understand what resonates with the target customers. Data mining techniques can be used to distill a customer based perceptual map as an alternative to marketer's knowledge from mining the customer's

perception. However, the positioning also requires a creative and effective component which is presently lacking in artificial intelligence. Nonetheless, we are seeing an increasing number of examples of AI participating in the creative process. For example, using AI to compose its own music and also to write short stories.

Yet there is still a long way to go for AI to be creative as humans while still maintaining the strategic relevance. So, it is about being creative and also retaining strategic relevance. For example, a script of 2018 Lexus car "Driven by Intuition" TV commercial was created by AI by applying machine learning approach. Lexus trained machines using award-winning luxury ads. Lexus brand data and emotion data and were shown to connect with viewers. The commercial appeared to have face validity as a luxury car commercial. However, this commercial may not be very strategic because the ad had an unclear customer segmentation and ambiguous positioning. So, these were the two problems with this ad. This real-world example illustrates that positioning can be expected to be human and AI collaboration for the immediate future.

Now let us look at what are the insights for marketing manager for this AI in STP. So for segmentation, the current practice is segments based on a few variables a priori, aggregate customer equity model that is customer for example acquisition rate, churn rate. While the emerging practice here is discovered novel segments using unlimited number of variables. Individual customer lifetime value model segmentation of 1. In targeting, the current practice is to target segments, trade-off target market size and effectiveness. So, this is the trade-off that needs to be done.

The emerging practice targets individuals more. Flexible targeting and retargeting that is aggregate and disaggregate. Flexible targeting and retargeting. The third is positioning, the current practice is human judgment and intuition. While the emerging practice is AI based optimization of positioning. So, here we are now talking of optimization of this positioning that is based on AI.

Now let us look at the insights for marketing managers. The future question for segmentation is how best to visualize segmentation? So that is one question. For targeting, what happens when the customer is AI? For example, Alexa and Siri are not the only AI that can potentially buy things. Increasingly, customers use AI as their agents for information collection, price, negotiations or purchase. So, what happens when the customer is AI and customer is not a human? In positioning, the future question would be how should marketers and AI collaborate to resonate with the customer? And you have seen that in the immediate future human or AI can be the customers. So how to resonate with them?

In order to conclude, we had discussed how AI is changing the strategic marketing practice. We also studied the importance and role of different kinds of AI for STP.

Mechanical AI is ideal for segmentation. Thinking AI is more apt for targeting and feeling AI is best suited for positioning. Thinking and feeling AI for targeting and positioning requires a greater degree of human intervention for actually creating the value. So marketers must be ready for the future where the customer and AI will merge and AI will dominate customer shopping behavior in the near future. And these are the 5 books from which the material for this module was taken. Thank you.