

Marketing Effectiveness Measurement and Optimization

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5. Analytical methods for measuring and improving the effectiveness of marketing activities

- Funnel analysis: Analyze user dropout rates at each stage from awareness to purchase and identify areas for improvement
- Conjoint analysis: Measure the importance of each product attribute (price, function, etc.) and support optimal product design
- 4P analysis: Analyze market strategies from the perspectives of product, price, place, and promotion
- STP analysis: Analyze strategies for segmentation, targeting, and positioning
- ABC analysis: Classify products and services into A (important), B (medium), and C (minor) to optimize resource allocation

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Funnel analysis

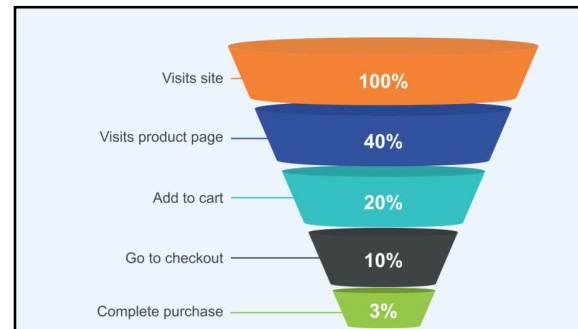
- Funnel analysis is a method to visualize the process that users take toward a certain action or goal, and analyze the conversion rate at each stage of that process.
- In this simple example of funnel analysis using Python, we see the flow that users take from registration to purchase on a particular website.

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Funnel analysis

- This code calculates the number of users at each step and visualizes the funnel analysis based on that.
- The conversion rate is the conversion rate between each step, and the conversion rate from the first step is always 100%.
- Depending on the structure of your data and your purpose, you may need to modify this example to apply it.
- The data set must be in a format that includes each user's actions and their timing.

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Conjoint analysis

- Conjoint analysis is a method for **understanding customer preferences for features** and characteristics of products and services.
- Ex). When an office worker buys diapers for his baby at a convenience store, he also buys some beer to take home.
- In this example of conjoint analysis in Python, we use a library called pyconjoint.
pip install pyconjoint

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Users' preferences

- Perform conjoint analysis using customer preference data for three different features (Feature_A, Feature_B, Feature_C).
- The pyconjoint library predicts preference scores using a linear conjoint model.
- Set the attributes and preference scores for conjoint analysis according to the actual data set and problem, and use the appropriate model to perform the analysis.

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Customer Segmentation Portfolio Analysis

- CS Portfolio Analysis (Customer Segmentation Portfolio Analysis) is a method for classifying customers into different segments and determining strategies and actions for each segment.
- In this example of CS Portfolio Analysis using Python, we use K-Means clustering to segment customers and calculate **the average purchase amount and purchase frequency for each segment**.

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		Product		Levels of each attribute
Brand:	iPhone	Samsung	Sony	
Screen size:	5"	6"	5.5"	
Colour:	Silver	Turquoise	White	
Price:	\$1,200	\$1,100	\$1,000	
Attributes				

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Psychographics and behavior:
<https://github.com/topics/customer-segmentation-analysis>

- Age
- Geography
- Urbanization – are they city or rural?
- Income
- Relationship status
- Family
- Job type
- Basket size
- Share of wallet
- Tenure (how long they stay with you)
- Long-term loyalty (a combination of share of wallet and tenure)

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The number of purchases

- K-Means clustering is performed using **the number of purchases and the average purchase amount to visualize each segment**.
- The final result shows the average number of purchases and the average purchase amount for each segment.
- In CS portfolio analysis, it is important to consider marketing strategies and measures to improve customer experience that are suitable for each segment based on this information.

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Customer portfolio analysis

- customer ID
- transaction date
- transaction amount
- SKUs purchased, their quantity and price
- categories purchased
- product margin
- transaction channel (web-site, store, app) etc.



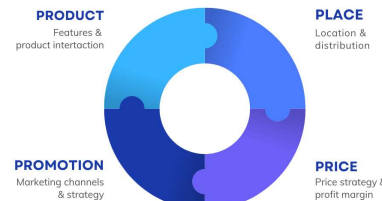
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4P analysis

- 4P analysis is a method for considering marketing strategies, evaluating four elements: Product, Price, Place, and Promotion.
- This is not an example for conducting 4P analysis using Python, but a simple code that shows the elements of 4P analysis.
- Elements related to each P are compiled into a dictionary and displayed.
- 4P analysis is used to evaluate a company's overall marketing strategy for its products and services, and by adjusting each element, a competitive advantage in the market is established.

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MARKETING MIX



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STP analysis

- STP analysis (Segmentation, Targeting, Positioning Analysis) is a marketing strategy method for segmenting the market (Segmentation), focusing on specific segments (Targeting), and appropriately positioning products and services for each segment (Positioning).
- STP analysis is mainly useful for planning marketing strategies.
- Cluster customer data and divide it into three segments, and present targeting and positioning strategies for each segment.
- Select the appropriate segmentation method and strategy based on actual data and goals.

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- **Cluster customer data and divide it into three segments, and present targeting and positioning strategies for each segment.**
- Select the appropriate segmentation method and strategy based on actual data and goals.

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ABC analysis

- ABC analysis is a method for classifying the importance of items used in inventory management, customer analysis, etc.
- ABC analysis in Python: ABC analysis based on item sales and quantity → needs to be modified to suit actual data and analysis

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ABC analysis classes			
	Importance	Percentage of total inventory	Impact on revenue or profits
Class A	Vital	Low	High
Class B	Important	Medium	Medium
Class C	Less important	High	Low