Customer segmentation

Applied data science

Introduction

Title: problem definition and design Thinking for Customer segmentation

Objective: The objective for customer segmentation is to divide a large target market into smaller, more manageable segments based on similar characteristics, behaviors, needs, or preferences. This allows businesses to understand and cater to the unique needs of each segment more effectively, leading to improved customer satisfaction, higher sales, and better marketing strategies.

Agenda:

    Problem definition

    Design Thinking overview

    Applying design Thinking for Customer segmentation

    conclusion

Problem definition

Ineffective Targeting and Personalization

- *One problem that businesses face in customer segmentation is ineffective targeting and personalization. This occurs when businesses fail to accurately identify and understand the specific needs, preferences, and behaviors of different customer segments, resulting in generic marketing strategies that do not resonate with the intended audience.*

Design Thinking Overview

- Design thinking helps businesses create targeted and personalized solutions that meet the unique needs of different customer segments. It emphasizes empathy, ideation, prototyping, and testing to ensure effective customer segmentation and improve customer satisfaction.

- The following terms can be defined as:

  Data collection

  Data preprocessing

  Feature engineering

  Cluster algorithm

  Visualization

  Interpretation

Applying data science for customer segmentation

1. Data Collection: Data collection involves gathering relevant information about customers, such as demographics, purchase history, online behavior, and feedback. This can be done through surveys, interviews, observations, or by analyzing existing data sources like CRM systems or website .

2. Data Preprocessing: *Data preprocessing refers to the steps taken to clean, transform, and prepare the collected data for analysis. This includes removing duplicates, handling missing values, standardizing data formats, and addressing outliers or inconsistencies in the data.*

3. Feature Engineering: *Feature engineering involves selecting or creating relevant variables (features) from the collected data that will be used to differentiate and segment customers. This may include creating new variables based on customer behavior, demographics, or preferences.*

4.Clustering algorithms *are used to group customers into distinct segments based on similarities in their characteristics or behaviors. These algorithms analyze the data and identify patterns or clusters that represent different customer segments. Popular clustering algorithms include K-means, Hierarchical Clustering, and DBSCAN.*

- *5.Visualization: Visualization refers to the process of representing the segmented customer data in a visual format, such as charts, graphs, or maps. Visualizations help to understand and communicate the characteristics and patterns of each customer segment effectively.*

6. Interpretation: Interpretation involves analyzing and making sense of the segmented customer data and the insights derived from it. It involves understanding the unique characteristics, preferences, and needs of each segment and translating them into actionable strategies or recommendations for marketing, product development, or customer experience improvement.

Conclusion:

Customer segmentation is a crucial strategy for businesses to understand and cater to the diverse needs of their customers. It involves dividing the customer base into distinct segments based on common characteristics or behaviors.Design thinking principles can be applied to customer segmentation, including empathizing with customers, defining segments, ideating innovative solutions, prototyping and testing, and implementing refined strategies.