

PROJECT TITLE:

CUSTOMER SEGMENTATION USING DATA SCIENCE

PROBLEM DEFINITION:

- Customer segmentation is the process of dividing a company's customer base into distinct groups or segments based on shared characteristics or behaviors. These characteristics can include demographic data (age, gender, location), psychographic data (interests, values, lifestyles), and behavioral data (purchase history, online activity).
- Data science plays a crucial role in customer segmentation by leveraging advanced analytical techniques and algorithms to identify meaningful patterns and segments within a large dataset.
- In summary, customer segmentation using data science is a powerful approach to tailor marketing efforts and enhance customer experiences. However, it involves various challenges related to data quality, algorithm selection, interpretation, and ethical considerations that need to be carefully managed for successful implementation.

LITERATURE SURVEY:

Title	Methodology	Outcome
Customer Segmentation and Profiling for Life Insurance Using K-Modes Clustering and Decision Tree Classifier	1) Decision Tree 2) K-Modes Clustering	In This Article, They concluded using Data mining approaches, that segmenting customers may be accomplished. The result of consumer segmentation have been improved by implementing both clustering and classification algorithms.
Customer Segmentation Using RFM Model and K-Means Clustering	1) K-Means Clustering 2) RFM(Recency Frequency Monetary) Model	In this Article, It is concluded that it is possible to perform customer segmentation and provide management strategy recommendations by combining the RFM and K-Means Algorithm. The experiment on customer value analysis and profile creations were also able to be achieved by identifying patterns and differences among consumers , predicting their actions ,and providing them with improved alternatives and opportunities.
Customer Segmentation Analysis and Customer Lifetime Value Prediction Using Pareto/NBD and Gamma-Gamma Model	1) Machine learning 2) K-Means Algorithms 3) RFM Model	By combining marketing and business knowledge with information technology, RFM is easy to apply and flexible method for implementing customer segmentation. As Mark Patron commented that RFM did not provide the company the profitability and the potential of a customer,

		using the combination of RFM and CLV results to find hidden potential customers in the business will be very profitable.
Customer Segmentation analysis for improving sales using clustering	1) Two Phase Clustering Model 2) K-Means Clustering 3) Data Mining Techniques	This research emphasises the practical applications of clustering in identifying customer segments, allowing businesses to allocate resources efficiently, foster customer loyalty and drive revenue growth. The abstract underscores the importance of data-driven customer segmentation as a strategic tool for businesses aiming to thrive in competitive markets, ultimately leading to improved sales outcomes

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