Analyzing Customer Loyality Using RFM and K-Means Clustering

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Abstract:

In today's world of marketing firms, retail stores, banks, etc. doing every possible thing to obtain newer customers while retaining existing ones, many companies are competing to leverage the customer segmentation method as a way to gain competitive advantage. Our project utilized the customer segmentation approach where we collected data on customers, analyzed and processed, and modeled them using a data science model that leveraged clustering or segmentation of the customers with the RFM (Recency Frequency Monetary) modeling and K-mean clustering algorithm for existing customers. The data set we used is of UK E-commerce data set from UCI repository for Machine Learning on customer's purchasing behavioral data. In simple terms, customer would be clustered as super customer, intermediate customer, customer who still churning based on the RFM score to assign them to a cluster. Additionally, we developed a web model where an e-commerce startup or e-commerce business analyst could analyze their own customers in their time using the customer segmentation, RFM modeling and K-mean clustering. This would allow them analyze their customer and individually market to customers accordingly and achieve the business strategy of good relations with customers.

Keywords:

Data Mining; RFM Model; Cluster Analysis; Customer Segmentation, K-Means Algorithm.