**KDD-001**

**Customer Segmentation Process for Targeted Marketing**

***Note:*** *1. Allowed Status for a KDD is Approved, In\_Progress, Rejected  
 2. Allowed Recommendations for a KDD are Recommended, Decision Pending, Not Recommended*

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| KDD Title | Customer Segmentation Process for Targeted Marketing |
| KDD ID | KDD-001 |
| Date Opened | 23-Dec-2024 |
| Approved Date |  |
| Owner |  |
| Status | In\_Progress |
| Key Stakeholders / Approvers |  |
| KDD Description | As-is process: 1.The current process involves collecting transaction data from various databases without a structured approach to segmentation 2.Marketing strategies are not tailored to specific customer segments, leading to less effective campaigns  Problem faced: The lack of targeted marketing strategies results in lower conversion rates and higher customer acquisition costs. There is a need for a systematic approach to segment customers based on their purchasing behavior and demographics. |
| Impacted Process | 1. Data Collection 2. Data Preprocessing 3. Data Transformation 4. Data Mining 5. Pattern Evaluation 6. Marketing Strategy Development |
| Impacted Details | 1. Improved personalization of marketing campaigns, leading to higher customer satisfaction and engagement. 2. Requires regular updates and monitoring to ensure data quality and relevance of customer segments. 3. Implement a structured KDD process for customer segmentation, including data selection, preprocessing, transformation, mining, and pattern evaluation. |
| Impacted Function Assumptions | 1. The necessary transaction and demographic data are available and accessible. The marketing team is equipped to interpret and act on the insights generated. |
| Impacted Function Details | 1. Data Collection 2. Data Preprocessing 3. Data Transformation 4. Data Mining 5. Pattern Evaluation 6. Marketing Strategy Development |

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| # | Solutions | Merits | Demerits | Recommendation |
| 1 | 1. Data selection involves identifying and collecting relevant transaction data from databases. | 1. Focuses on transaction data such as purchase history, frequency of purchases, average transaction value, and product categories. 2. Includes demographic data like age, gender, and location for valuable insights. |  | Decision Pending |
| 2 | 1. Data preprocessing involves cleaning the data to remove inconsistencies, handling missing values, and transforming the data into a suitable format for analysis. | 1. Ensures data quality by removing inconsistencies. 2. Handles missing values through removal or imputation techniques like mean imputation or regression imputation. |  | Decision Pending |
| 3 | 1. Data transformation involves normalizing the data and performing feature selection to identify the most relevant variables for segmentation. | 1. Normalization ensures all variables are on the same scale. 2. Feature selection techniques like correlation analysis, PCA, and decision trees help identify important features. |  | Decision Pending |
| 4 | 1. Data mining involves applying clustering algorithms to segment customers into distinct groups based on their purchasing behavior. | 1. Clustering algorithms like K-means, hierarchical clustering, and DBSCAN offer different strengths and weaknesses. 2. Experimentation with multiple algorithms can help find the best fit. |  | Decision Pending |
| 5 | 1. Pattern evaluation involves interpreting the clusters to understand the characteristics and behaviors of each customer segment. | 1. Helps develop targeted marketing strategies based on customer segments. 2. Allows for tailored promotions and offers for different customer segments. |  | Decision Pending |

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| Next Steps | Final Decision |
| Further discussion and experimentation with clustering algorithms to find the best fit for customer segmentation. | Decision Pending |