

Task Assignment for Data Analyst Group (Deadline: 21st January 2025)

Project Title: Customer Segmentation and Behavior Analysis for Targeted Marketing

Objective: The goal of this task is to segment the customer base based on purchasing behavior, demographic information, and engagement patterns. Using advanced clustering techniques and data analysis, the team will identify distinct customer segments and provide actionable insights for targeted marketing strategies.

Team Members:

1. **Pavan Rao (Team Lead):**7517916375
 2. **Janhavi Jagtap (Data Analyst):** 8855909297
 3. **Shrikrishna Jadhavar (Data Analyst):** 8805145120
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Detailed Roles and Responsibilities:

1. Pavan Rao (Team Lead)

- **Role:** Data Integration, Leadership, and Final Report Compilation
- **Responsibilities:**
 - **Data Integration & Coordination:**
Pavan will oversee the collection of customer-related data from multiple sources, including transactional data, CRM systems, and customer surveys. He will ensure the data is integrated into a unified dataset and will lead the preparation of the data for analysis by cleaning, preprocessing, and transforming it as needed.
 - **Clustering Algorithm Selection & Implementation:**
As the team lead, Pavan will be responsible for selecting the most appropriate clustering algorithm to segment the customers. This could involve using k-means clustering, DBSCAN, or hierarchical clustering based on the nature of the data. He will ensure that the chosen algorithm is properly applied to identify customer segments.
 - **Data Exploration & Communication:**
Pavan will be involved in the initial exploratory data analysis (EDA) to better understand the structure and characteristics of the customer data. He will also communicate effectively with Janhavi and Shrikrishna to discuss progress, share insights, and ensure the team is aligned.
 - **Final Report & Recommendations:**
Pavan will compile the findings of the analysis into a structured report. The report will include a detailed explanation of the customer segments, how they were identified, and the marketing strategies that would be most effective for each segment. He will also prepare a presentation for stakeholders.

2. Janhavi Jagtap (Data Analyst)

- **Role:** Feature Engineering, Segmentation Insights, and Report Writing
- **Responsibilities:**
 - **Feature Engineering:**

Janhavi will work on identifying and creating relevant features from the customer data that will help improve the segmentation process. This might involve creating new variables such as customer lifetime value (CLV), frequency of purchase, and average order value (AOV). She will also identify potential demographic factors such as age, location, and gender that could influence segmentation.
 - **Segmentation & Profiling:**

After Pavan implements the clustering algorithm, Janhavi will analyze the results and develop detailed profiles for each identified customer segment. This will include behavioral characteristics, purchasing patterns, and demographic details for each segment. She will identify high-value segments and segments with the most potential for growth.
 - **Insight Generation & Strategy Development:**

Based on the segmentation, Janhavi will generate actionable insights that can inform targeted marketing strategies. She will work closely with Pavan and Shrikrishna to discuss which strategies should be employed for each customer segment. For example, one segment may require loyalty programs, while another may benefit more from targeted promotions.
 - **Report Contribution:**

Janhavi will contribute to writing the final report, particularly the sections that describe the customer segments and the insights derived from the data. She will also help create the presentation to effectively communicate findings to stakeholders.

3. Shrikrishna Jadhavar (Data Analyst)

- **Role:** Data Analysis, Validation, and Marketing Strategy Support
- **Responsibilities:**
 - **Data Cleaning & Preprocessing:**

Shrikrishna will take the lead on ensuring that the customer data is properly cleaned and preprocessed. He will remove any errors, duplicates, and outliers from the data, ensuring that the dataset is consistent and ready for clustering analysis. He will also handle the normalization or scaling of features that are important for the clustering process.
 - **Segmentation Validation & Interpretation:**

Shrikrishna will validate the segmentation results by reviewing the clusters and ensuring they make sense from a business perspective. He will check if the segments are distinct, useful, and actionable. If any segments appear too similar or too broad, he will recommend adjustments in the feature set or the clustering approach.
 - **Marketing Strategy Recommendations:**

Based on the customer segments identified, Shrikrishna will work on providing recommendations for marketing campaigns. This could include developing customer personas for each segment, suggesting targeted messaging, and recommending specific channels for reaching each group (e.g.,

email marketing for high-value segments or social media for younger demographics).

- **Collaboration & Reporting:**

Shrikrishna will collaborate closely with Janhavi and Pavan to refine the customer segments and generate meaningful marketing strategies. He will contribute to the final report and presentation, ensuring that the marketing strategies are clearly defined and backed by data insights.

Deliverables:

- **Customer Segmentation Report:**

A detailed report that includes the following sections:

- Overview of the data and features used for segmentation
- Detailed descriptions of the customer segments, including behavioral and demographic profiles
- Insights on high-value customer segments and potential areas for marketing focus
- Suggested marketing strategies tailored for each segment (e.g., content type, pricing strategies, channel recommendations)

Deadline:

- The **final report** should be completed and submitted by **21st January 2025**.