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1. Executive Summary

This report presents the results of a customer segmentation analysis conducted to refine marketing strategies, enhance customer engagement, and boost sales for a convenience store chain.

Transactional data is transformed into a customer-centric dataset by creating new features that will later on be used for the segmentation of customers into six distinct groups, each exhibiting unique traits and purchasing behaviours, unpacking valuable insights into customer preferences and motivations.

Big Spenders and Bargain Hunters segments were chosen as the most important segments to focus on due to their market potential and distinct purchasing patterns. Tailored strategies, such as emphasising premium products for Big Spenders and offering value-oriented options for Bargain Hunters, were suggested to optimise marketing efforts.

In addition, other strategies such as tailored marketing, recommendation system, loyalty program and segment behavior predictive models were also recommended.

2. Feature Description

15 features were chosen to create a comprehensive dataset, aiming to construct nuanced profiles for each customer segment. This is a relatively high number of features; however they collectively provide a well-rounded understanding of customer engagement and value, transaction behavior, shopping patterns, and product preferences. Furthermore, the high dimensionality inherent in the dataset can be effectively mitigated during model implementation through Principal Component Analysis (PCA).

The data dictionary below outlines the description of each feature along with the rationale behind its inclusion:

Feature	Description	Importance
total_transactions	Total number of transactions made by the customer	Signifies how often he made a purchase within the analysed period. A higher value suggests higher engagement
total_spend	Total amount of money the customer has spent across all transactions	Indicates customer lifetime value, offering insights into the overall financial contribution of the customer to the business
total_products	Total number of products purchased by a customer across all transactions	Helps understanding the breadth of the customer's buying habits and preferences
unique_products	Number of different products the customer has purchased.	Reveals the diversity in the product purchase behavior of customers
days_since_last_purchase	Number of days passed since the customer's last purchase	A shorter duration signifies more recent engagement, suggesting higher levels of customer activity and potential for future purchases