Customer Lookalike Model: Business Insights

Overview

The customer lookalike model uses transaction data to identify similar customers based on their spending habits, transaction frequency, and product preferences. This model helps businesses target specific customer segments for personalized marketing, product recommendations, and improved customer retention.

Methodology

Using three datasets—customers, products, and transactions—customer features were engineered:

- **Total Spent**: Total value spent across all transactions.

- **Average Transaction Value**: Average value of transactions.

- **Preferred Category**: The most purchased product category.

- **Transaction Count**: Number of transactions made by the customer.

These features were normalized using **StandardScaler** to ensure they contributed equally in the similarity calculation. Cosine similarity was then used to compute the similarity between customers.

Recommendations and Insights

For the first 20 customers, we identified the top 3 most similar customers based on similarity scores. These recommendations can guide the following business strategies:

1. **Targeted Marketing**: By identifying lookalike customers, businesses can focus on high-value segments for personalized campaigns, increasing the likelihood of conversion.

2. **Customer Retention**: The model helps companies tailor retention strategies for customers with behaviors similar to their best customers, such as offering loyalty rewards to high-spending customers.

3. **Cross-Selling**: By understanding the preferred product categories of lookalikes, businesses can recommend related products to increase sales.

4. **Personalized Experiences**: Segmenting customers and personalizing their experience based on similarities improves customer satisfaction and engagement.

Results and Future Work

The lookalike recommendations were saved in Lookalike.csv. Future improvements could involve expanding features to include demographics, using alternative similarity measures, and incorporating real-time data for dynamic recommendations.

Conclusion

This lookalike model helps businesses better understand customer behavior, offering insights to enhance marketing, sales, and retention strategies. It provides a practical approach to improving customer engagement and increasing business revenue.