Task 2: Lookalike Model

Objective

The goal was to build a Lookalike Model that identifies the top 3 most similar customers for a given customer based on their profile and transaction history.

Approach

1. **Data Preparation**:
    - Merged customer profile information with transaction data.
    - Created aggregate features like total quantity purchased, average price, and average transaction value.
2. **Similarity Calculation**:
    - Standardized features to ensure uniform scaling.
    - Computed similarity scores using **cosine similarity** between customer vectors.
3. **Output**:
    - For each customer in the range `C0001` to `C0020`, the top 3 most similar customers with similarity scores were identified.
    - The results were stored in a CSV file, formatted as a mapping: `CustomerID → [(SimilarCustomerID1, Score1), …]`.

Conclusion

This model can help in personalized marketing, improving customer retention, and driving cross-sell opportunities by recommending lookalike profiles.