Merchandising Prediction Model for Fashion Brands

Problem Statement: Understanding the attributes of leading competitor brands and their high-demand products on platforms like Myntra, Ajio, and Amazon India. The client wants to predict product demand and manufacturing trends to optimize their product offerings and align with consumer preferences.

Solution Overview: Build an AI-powered bot that analyzes the merchandising of women's t-shirts on e-commerce platforms. This bot will use available data to predict potential sales, identify leading products, and provide insights on consumer trends and preferences.

Key Features:

1. **Data Collection:**
    - Collect data on product attributes (e.g., neck, fabric, sleeve, occasion, color), reviews, and sales indicators from e-commerce platforms.
    - Use non-revenue indicators like review counts, review spikes, and ratings to extrapolate potential sales and demand.
2. **Demand Prediction:**
    - Use machine learning algorithms to analyze the collected data and predict product demand.
    - Identify patterns and trends in consumer behavior to forecast future demand.
3. **Competitive Analysis:**
    - Compare the client's products with those of leading competitors.
    - Identify attributes of high-demand products, including pricing, design, and consumer reviews.
4. **Product Insights:**
    - Provide insights on the best-selling products, their attributes, and pricing variations.
    - Use AI to generate recommendations for optimizing product mix and inventory based on predicted demand.
5. **Consumer Trend Analysis:**
    - Analyze changes in consumer preferences over time.
    - Provide insights on emerging trends and suggest adjustments to the product line to stay ahead of market demands.

Deliverables:

- **Web Application:** Develop a web-based application for merchandising prediction.
- **Data Model:** Provide a detailed data model that includes predictions on product demand and insights on consumer trends.
- **Dashboard:** Create an interactive dashboard for visualizing data, trends, and predictions.

Expected Outcomes:

- **Product Application:**
    - Develop an application where users can input sub-categories and receive insights on the best-selling products, attributes, and pricing variations.
    - Provide data-driven justification for the suggested best-selling products with a prediction accuracy of at least 70%.
- **Trend Analysis:**
    - Use GenAI to predict potential product-mix and indicate revenues based on the analysis of current top sellers.

    - Offer recommendations for manufacturing products in line with the latest trends.
- **Revenue Optimization:**
    - Optimize product mix and pricing strategies based on data-driven insights.
    - Increase sales and revenue by aligning products with consumer preferences and market demands.