Returns Optimization Engine for Fashion Brands

Problem Statement: Customer returns due to wrong sizing are a significant challenge for retailers on e-commerce platforms. The goal is to optimize returns by providing accurate size recommendations, reducing the return rates, and improving customer satisfaction.

Solution Overview: Build an AI-powered bot that assists in optimizing returns by analyzing size charts and providing accurate size recommendations. This bot will evaluate best-sellers and suggest platform size charts tailored to product attributes.

Key Features:

1. **Data Collection:**
    - Collect data on top-rated products, reviews, and size charts from e-commerce platforms.
    - Study size charts and actual product sizes to identify discrepancies.
2. **Size Recommendation:**
    - Analyze the collected data to provide accurate size recommendations.
    - Suggest platform size charts based on top-rated products and their attributes.
3. **Returns Reduction:**
    - Provide actionable insights to reduce returns due to sizing issues.
    - Offer recommendations for optimizing size charts and improving product fit.
4. **Customization:**
    - Allow brands to customize size recommendations based on their specific product lines and customer feedback.
    - Enable dynamic adjustments to size charts as new data becomes available.

Deliverables:

- **Web Application:** Develop a web-based application for returns optimization.
- **Data Model:** Provide a detailed data model that includes size recommendations and insights on return trends.
- **Dashboard:** Create an interactive dashboard for visualizing data, trends, and recommendations.

Expected Outcomes:

1. **Size Chart Optimization:**
    - Evaluate current best-sellers in a category (e.g., men's sports shoes) and study size charts.
    - Suggest recommended platform size charts for each attribute (e.g., fit, occasion, fabric).
2. **Return Reduction Insights:**
    - Provide insights on the reasons for returns (e.g., wrong sizing, fit issues) and recommend actions to address these issues.
    - Suggest improvements in size charts based on data analysis and customer feedback.
3. **Product Mis-Management:**
    - Divide the product mix based on attributes like channel, gender, sub-category, fit, occasion, and fabric.

- Benchmark average sizes of top-rated products and suggest a size mix that fits these attributes.

4. **Actionable Recommendations:**
   - Provide a suggested action path for optimizing size charts and reducing returns.
   - Offer recommendations for future product development and inventory management based on size and return trends.

Example Chart for Size Recommendations:

Attribute	Size	Average Dimensions (Top Sellers)	Brand Dimensions	Recommendation
Chest	XS	31.2 cm	32.2 cm	Lower by 0.2 cm
	S	33.4 cm	34.5 cm	Sustain size
	M	35.4 cm	35.6 cm	TBD
	L	36.1 cm	37 cm	List as XL
	XL	>37.2 cm	>38 cm	Sustain size
Waist	XS	24.5 cm	25.5 cm	Lower by 0.5 cm
	S	26.5 cm	27.5 cm	Sustain size
	M	28.5 cm	29 cm	TBD
	L	30 cm	31 cm	List as XL
	XL	>31.5 cm	>32.5 cm	Sustain size