Myntra Sales Data Analysis Report

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Source: https://www.kaggle.com/datasets/skmewati/myntra-sales-dataset

1. Dataset Description

1.1 Source

Myntra pants dataset containing **899 product records** of men's jeans across multiple fashion brands.

1.2 Columns

- **brand_name** – Clothing brand name (e.g., Roadster, Levis, WROGN, Flying Machine, Mufti).

- **pants_description** – Product description including fit, style, and fabric (e.g., Slim Fit, Relaxed Fit, Cotton).

- **price** – Final selling price after discount (Range: ₹459 – ₹3,499).

- **MRP** – Original price before discount (Range: ₹699 – ₹6,899).

- **discount_percent** – Percentage discount applied on MRP (Range: 5% – 50.88%).

- **ratings** – Average customer rating (Range: **1.7** – 4.9, mean ≈ 3.9).

- **number_of_ratings** – Number of reviews/ratings received (Range: 1 – 22,300+).

1.3 Data Quality

- **No missing values** – complete and clean dataset.

- Consistent structure with proper brand representation.

- Wide price, discount, and rating variation — good for retail analytics and recommendation engine modeling.

2. Operations Performed

2.1 Data Cleaning & Exploration

- Verified no null/missing data.

- Checked unique brands and identified **top 10 most common brands**.

- Summarized numerical columns (price, MRP, discount %, ratings, number_of_ratings) to find min, max, mean, median, and IQR.

2.2 Descriptive Analytics

- **Price Distribution:** Plotted a histogram to visualize pricing spread (most products priced between ₹749 – ₹1,393).

Price Distribution of Myntra Products
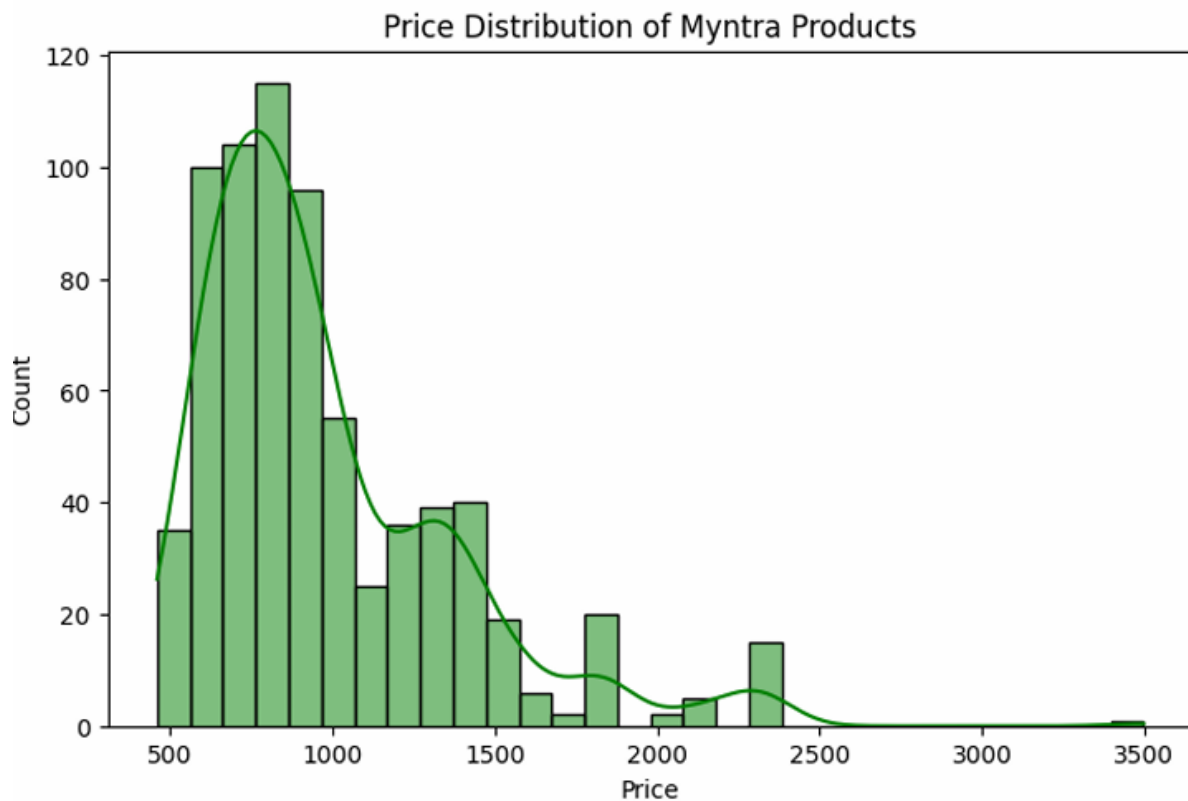
- **Top 10 Brands by Product Count :**This bar chart highlights the dominance of certain brands like Roadster, WROGN, and Flying Machine. These brands contribute the maximum number of listings, showing Myntra's reliance on youth-focused fashion. Smaller brands exist but contribute less to the overall catalog diversity.

Top 10 Brands by Product Count
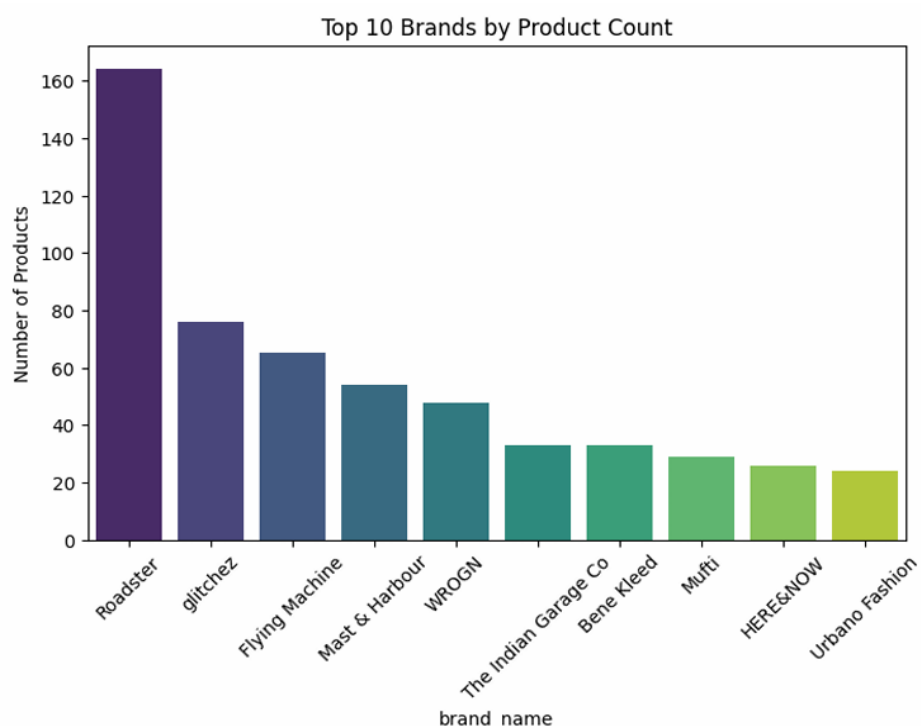
- **Ratings Line Plot (First 50 Rows) :** The line plot tracks ratings across the first 50 products. It shows fluctuations in customer ratings, with most products clustered between 3.5 and 4.5 stars. This reinforces the observation that customer satisfaction is generally stable, with only minor variations.


Ratings (first 50 rows)
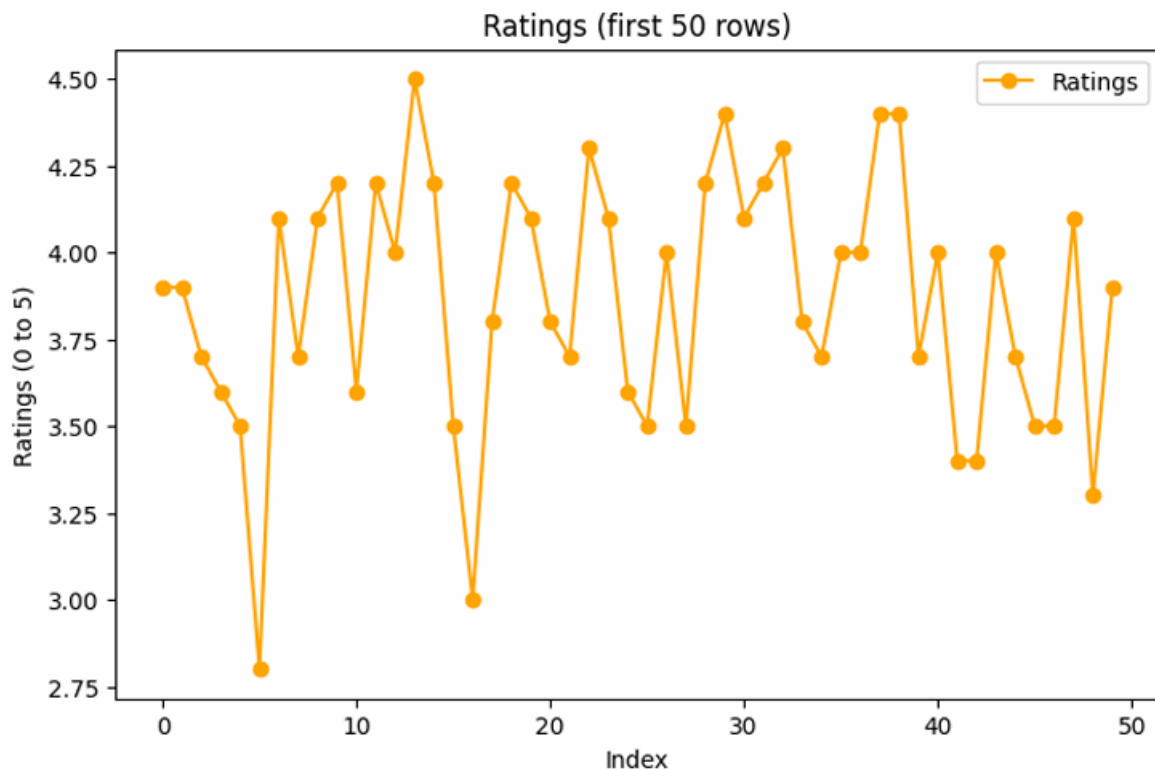
- **Relationaship strength Heatmap :** The heatmap shows relationships between price, MRP, discount, ratings, and number of ratings. Price and MRP have a strong positive correlation, while discount percent is negatively correlated with price. Ratings and number of ratings show weak correlation, proving popularity doesn't always mean better ratings.

Correlation Heatmap
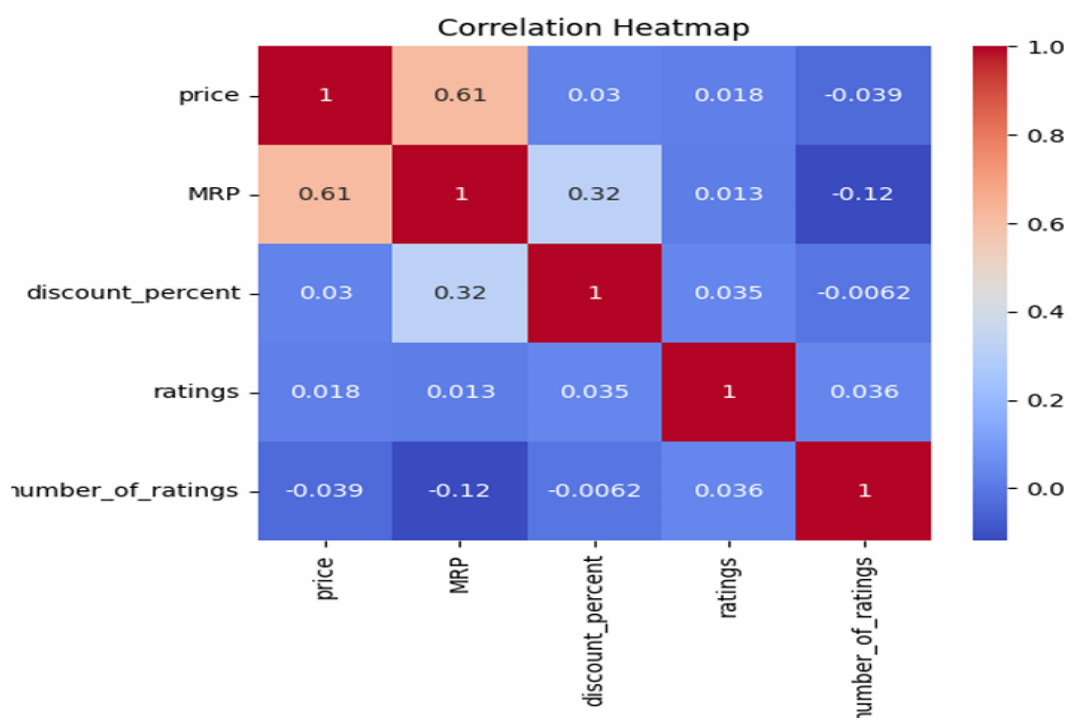
2.2 Relationship Analysis

- Compared **price vs. discount percent** to check discounting strategy.
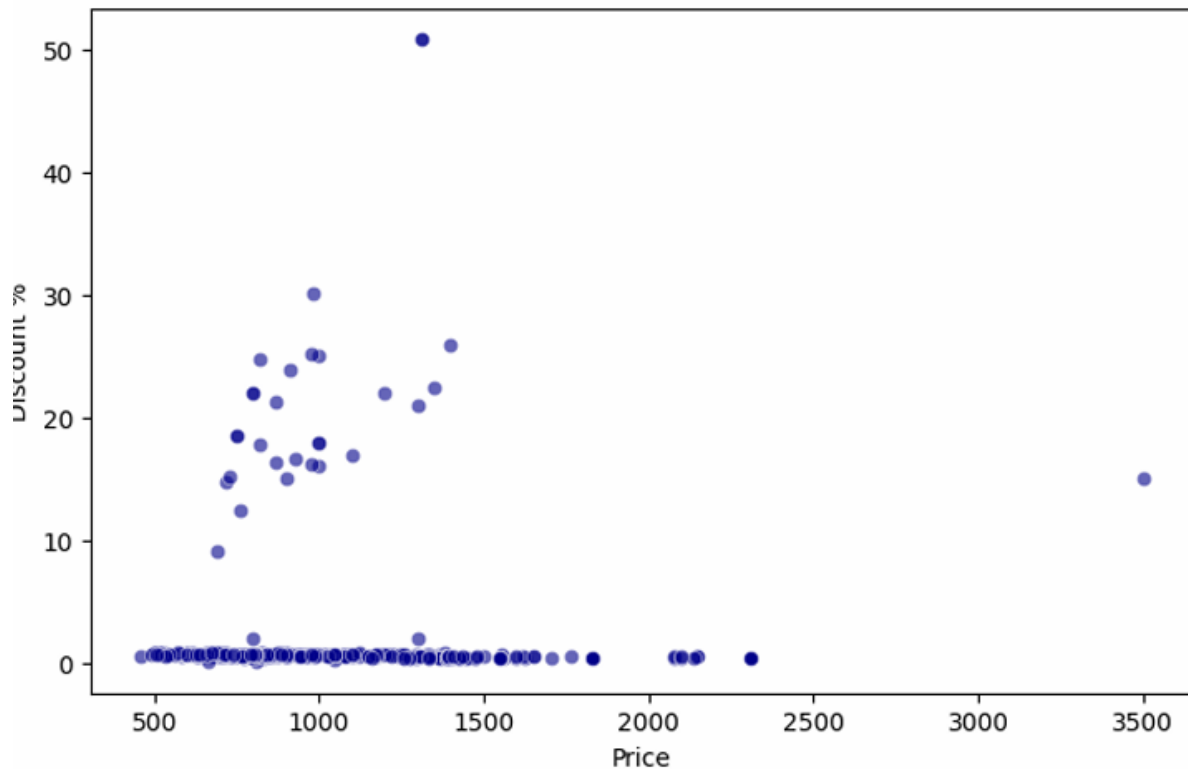
3. Key Insights

3.1 Price Insights

- Most products are **mid-range priced** (₹749 – ₹1,393).

- Average price ≈ **₹1,092**, Median ≈ **₹949** → majority products are affordable.

3.2 Brand Insights

- **Roadster** dominates with 178 products, followed by **WROGN** (104) and **Flying Machine** (80).

- These top 3 brands contribute a significant share of the catalog, suggesting a focus on popular youth-oriented brands.

3.3 Discount Trends

- Average discount ≈ **61%** (Median = 61%), meaning most products are sold at nearly half their MRP.

- Maximum discount is **50.88%**, showing strong price competitiveness.

3.4 Ratings & Popularity

- Overall customer sentiment is positive (Average rating ≈ **3.9**).

- Highly rated products (4.3 – 4.9) mostly belong to premium brands like Levis, WROGN, and Urbano Fashion.

- **Top 5 most-rated products** account for the largest share of customer engagement — e.g., Urbano Fashion Slim Fit Jeans has **22,300+ ratings**.

3.5 Demand Distribution

- High concentration of ratings on a few products shows a **bestseller-driven sales model**.

- Large number of products have fewer than 50 ratings, indicating slow-moving invent

4.Recommendations

1.1 Pricing & Discount Strategy

- Maintain 50-60% discount range for top-performing products to encourage high sales volume.

- Gradually reduce deep discounting on low-selling products to improve profitability.

1.2 Brand Expansion

- Diversify product mix by adding more from underrepresented brands and styles (e.g., Tapered Fit, Relaxed Fit).

- Leverage Roadster's popularity by promoting similar house brands.

1.3 Customer Engagement

- Boost ratings/reviews for low-rated or new products by incentivizing customer feedback.

- Highlight highly rated products in marketing campaigns to drive trust and conversions.

1.4 Inventory & Demand Optimization

- Monitor slow-moving products with very low ratings/review counts and consider clearance or removal.

- Use data-driven recommendations to push similar products to customers browsing top-rated jeans.

1.5 Future Analytics Opportunities

- Build **recommendation engines** based on ratings, price, and brand preferences.

- Create **price elasticity models** to measure how discounts affect demand.

- Use **customer segmentation** based on price sensitivity and rating preferences for target marketing.