

Shopping Behaviour Data Analytics Report

Executive Summary

This report provides a comprehensive analysis of customer shopping behavior across multiple locations in the United States. Key metrics, including spending patterns, product preferences, seasonal trends, and demographic insights, have been examined to support data-driven business decisions.

1. General Dashboard Insights

- **Average Spend Per Product:** \$59.60
- **Average Customer Age:** 44 years
- **Average Product Rating:** 3.75/5.0

Customer Purchases by Gender

- Women account for **53.75%** of purchases.
- Men account for **46.25%** of purchases.

Product Category Performance (by Number of Purchases)

- **Clothing:** 3.4M purchases – highest performing category
- **Accessories:** 2.4M purchases
- **Footwear:** 1.2M purchases
- **Outerwear:** 0.6M purchases – lowest performing category

Top 5 Customer Locations

1. California
2. Idaho
3. Illinois
4. Montana
5. Alabama

Top 5 Best-Selling Products

1. Blouse – 21.7%
2. Socks – 20.15%
3. Sandals – 19.63%
4. Shirt – 19.48%
5. Jacket – 19.4%

Size Preference

- Medium – 3.5M purchases
- Large – 2.0M purchases
- Small – 1.3M purchases
- Extra Large – 0.8M purchases

Top 5 Colour Preferences

- Yellow – 20.16%
- Olive – 20.11%
- Green – 20.08%
- Black – 19.86%
- Silver – 19.79%

2. Location-Specific Insights

2.1 Alabama

- **Top 5 Best-Selling Items:** Jewellery (23K), Shoes (16K), Coat (13K), Dress (12K), Blouse (12K)
- **Customer Purchases by Gender:** Female 50.11%, Male 49.89%
- **Top Colour Preferences by Gender:**
 - Red: Female 6.1K, Male 7.1K

- Peach: Female 3.0K, Male 7.7K
- Magenta: Female 2.9K, Male 7.3K
- Olive: Female 6.6K, Male 3.4K
- Silver: Female 3.8K, Male 6K

2.2 California

- **Top 5 Best-Selling Items:** Dress (14K), Skirt (13K), Jean (12K), Jewellery (12K), Shirt (11K)
- **Customer Purchases by Gender:** Female 52.39%, Male 47.61%
- **Top Colour Preferences by Gender:**
 - Turquoise: Female 9K, Male 15K
 - Beige: Female 15K, Male 2K
 - Green: Female 10K, Male 5K
 - Lavender: Female 7K, Male 6K
 - Silver: Female 3K, Male 7K

2.3 Montana

- **Top 5 Best-Selling Items:** Socks (15K), Handbag (13K), Jean (13K), Gloves (12K), Coat (12K)
- **Customer Purchases by Gender:** Female 62.1%, Male 37.9%
- **Top Colour Preferences by Gender:**
 - Gray: Female 10K, Male 6K
 - Pink: Female 10K, Male 4K
 - Black: Female 14K, Male 0K
 - Orange: Female 7K, Male 6K
 - Violet: Female 6K, Male 7K

2.4 Illinois

- **Top 5 Best-Selling Items:** Shirt (24K), Scarf (14K), Jacket (13K), Belt (13K), Sweater (12K)
- **Customer Purchases by Gender:** Female 52.83%, Male 47.17%
- **Top Colour Preferences by Gender:**
 - Olive: Female 10.1K, Male 10.1K
 - Gray: Female 10.3K, Male 8.3K
 - Brown: Female 10.1K, Male 3.8K
 - Maroon: Female 9.5K, Male 2.9K
 - Teal: Female 5.7K, Male 5.1K

2.5 Idaho

- **Top 5 Best-Selling Items:** Coat (19.9K), Belt (19.3K), Blouse (13.8K), Shorts (12.7K), Hoodie (12.2K)
- **Customer Purchases by Gender:** Female 57.77%, Male 42.23%
- **Top Colour Preferences by Gender:**
 - Black: Female 15K, Male 5K
 - Cyan: Female 16K, Male 3K
 - Violet: Female 6K, Male 8K
 - Pink: Female 9K, Male 4K
 - Teal: Female 6K, Male 5K

3. Seasonal Performance Insights

Top 5 Locations – Purchases by Season

Location	Spring	Summer	Winter	Fall
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Alabama	47K	42K	42K	42K
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California	45K	50K	40K	49K
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Location Spring Summer Winter Fall

Montana	54K	63K	42K	39K
Illinois	42K	56K	42K	46K
Idaho	55K	55K	36K	46K

Seasonal Performance by Gender – Alabama Example**Season Female Male**

Spring	29K	18K
Summer	12K	30K
Winter	29K	13K
Fall	17K	25K

- Observations:
 - Summer purchases are higher for males in Alabama, while females dominate in spring and winter.
 - Similar gender-specific seasonal patterns are observed across other locations.

4. Frequency of Purchase by Gender

- Frequency categories: Weekly, Bi-weekly, Monthly, Quarterly, Annually, Every 3 months, Fortnightly
- Alabama example:
 - Weekly: Female 18K, Male 8K
 - Monthly: Female 3K, Male 17K
 - Annually: Female 3K, Male 11K

- Insight: Women tend to purchase more frequently in short intervals (weekly/fortnightly), whereas men show higher purchases monthly or annually.
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5. Size Preference by Gender

- **Alabama:** Medium: Female 28K, Male 42K | Large: Female 33K, Male 16K | Small: Female 13K, Male 19K | XL: Female 12K, Male 10K
 - **California:** Medium dominates for both genders (Female 54K, Male 44K)
 - **Montana:** Female preference heavily skews toward Medium and Large sizes
 - Insight: Medium size is the most popular across all locations, with notable gender-based variations.
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Key Insights & Recommendations

1. Product Strategy:

- Clothing and accessories drive the majority of purchases. Focus promotions and stock on these categories.
- Top-selling products differ slightly by location; localized inventory and marketing campaigns are recommended.

2. Customer Segmentation:

- Gender-based differences in purchase frequency and size preferences can guide targeted campaigns.
- Female customers dominate overall, but male purchasing spikes seasonally.

3. Seasonal Promotions:

- Tailor seasonal promotions to gender-specific buying patterns. For example, summer campaigns in Alabama should target male customers.

4. Colour & Size Preferences:

- Medium-sized products and colours like Yellow, Olive, Green, and Black are consistently preferred.
- Consider aligning merchandising, web filters, and advertising to highlight these popular choices.

5. Location-Based Strategy:

- Top-performing locations: Alabama, California, Montana, Illinois, Idaho.
- Regional campaigns should consider local best-selling items and colour preferences.

Actionable Insights – Shopping Behaviour Analysis

1. Inventory & Product Management

- **Focus on top categories:** Clothing and accessories are the most purchased items. Increase stock and variety in these categories to reduce stockouts.
- **Best-selling products per location:**
 - Alabama: Jewellery, Shoes, Coat
 - California: Dress, Skirt, Jean
 - Montana: Socks, Handbag
 - Illinois: Shirt, Scarf
 - Idaho: Coat, Belt

→ Adjust inventory regionally based on local demand to prevent overstocking slow-moving items.

- **Size optimization:** Medium sizes dominate purchases. Ensure sufficient stock in Medium and Large sizes, while keeping smaller quantities for Small and XL.
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2. Marketing & Promotions

- **Gender-targeted campaigns:**
 - Female customers dominate overall, but male purchases spike in certain seasons (e.g., Alabama summer).
 - Run gender-targeted campaigns aligned with seasonal trends for maximum impact.
 - **Colour-focused promotions:**
 - Highlight popular colours (Yellow, Olive, Green, Black, Silver) in product displays and ads.
 - Consider seasonal colour campaigns, as colour preference varies slightly by location.
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3. Seasonal & Regional Strategy

- **Seasonal promotions:**
 - Summer: Promote items preferred by males in Alabama, females in Montana.
 - Spring/Winter: Focus on female-targeted campaigns where they dominate purchases.
 - **Regional focus:**
 - Prioritize top locations: Alabama, California, Montana, Illinois, Idaho.
 - Tailor product assortment and marketing content for each region based on best-selling items and colours.
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4. Customer Engagement & Retention

- **Purchase frequency patterns:**
 - Women purchase more frequently (weekly/bi-weekly), men tend to purchase monthly/annually.
 - Implement loyalty programs, reminders, or subscription services to encourage repeat purchases aligned with these patterns.
 - **Top product recommendations:**
 - For predictive personalization, offer top 5 likely items based on location, gender, and season to increase basket size.
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5. Data-Driven Decision Making

- **Leverage predictive analytics:**
 - Use location, gender, and season to forecast likely purchases.
 - Implement a recommendation engine to suggest products and drive up cross-selling opportunities.
 - **Monitor underperforming categories:**
 - Outerwear is the least purchased category. Consider bundling, discounting, or removing slow-moving stock to optimize space and investment.
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6. E-Commerce & Website Strategy

- **Highlight top colors and sizes:** Display Medium-sized items in trending colors prominently on the homepage or category pages.
- **Localized recommendations:** Show region-specific best-sellers to increase conversion rates.
- **Seasonal banners:** Use seasonal campaigns (e.g., Summer Sale) to highlight the products preferred by the majority in that season.

Summary:

By acting on these insights, the business can **increase sales efficiency**, **improve customer satisfaction**, and **maximize inventory turnover**. Key actions include **regional inventory adjustment**, **gender-specific marketing**, **seasonal campaigns**, and **predictive personalization**.