**SHOPPING TRENDS**

The Customer shopping preferences offers valuable insights into consumer behavior and purchasing patterns. Understanding customer preferences and trends is critical for businesses to tailor their products, marketing strategies, and overall customer experience. This captures a wide range of customer attributes including age, gender, purchase history, preferred payment methods, frequency of purchases, and more. Analyzing this data can help make informed decisions, optimize product offerings, and enhance customer satisfaction.

In this Trend various features related to customer shopping preferences, gathering essential information for businesses seeking to enhance their understanding of their customer base. The features include:

* customer ID
* age
* gender
* purchase amount
* preferred payment methods
* frequency of purchases etc.

**COLUMN DEFINITION**

* **Customer ID** - Unique identifier for each customer
* **Age** - Age of the customer
* **Gender** - Gender of the customer (Male/Female)
* **Item Purchased** - The item purchased by the customer
* **Category** - Category of the item purchased
* **Purchase Amount (USD)** - The amount of the purchase in USD
* **Location** - Location where the purchase was made
* **Size** - Size of the purchased item
* **Color** - Color of the purchased item
* **Season** - Season during which the purchase was made
* **Review Rating** - Rating given by the customer for the purchased item
* **Subscription Status** - Indicates if the customer has a subscription (Yes/No)
* **Shipping Type** - Type of shipping chosen by the customer
* **Discount Applied** - Indicates if a discount was applied to the purchase (Yes/No)
* **Promo Code Used** - Indicates if a promo code was used for the purchase (Yes/No)
* **Previous Purchases** - The total count of transactions concluded by the customer at the store, excluding the ongoing transaction
* **Payment Method** - Customer's preferred payment method
* **Frequency of Purchases** - Frequency at which the customer makes purchases (e.g., Weekly, Fortnightly, Monthly)

**EXPLORATORY DATA ANALYSIS (EDA)**

This Analysis serves as a foundation for businesses looking to apply data-driven insights for better decision-making and customer-centric strategies.

**🛍️ Customer Behavior & Demographics**

* **Which age group spends the most on average?**

-- Using SQL query, it shows that customers in the age group of **18-25** spend more than any other age group. Applying this to the modern world is functional because young adults have a strong desire to purchase items irrespective of the season thereby spending more than any other people. Businesses should rather provide services and products for these customers in this age group because they will tend to make even more profit from them.

* **Do subscription members spend more than non-members?**

-- There is a slight difference between members who are not subscribers and members who are subscribers. Analysis shows that non-subscribers tend to spend a fraction more than subscribers. But looking at this analysis, this shows that non-subscribers then spend more than those who are members

* **What is gender distribution across product categories?**

|  | **Gender** | **Category** | **Purchase** |
| --- | --- | --- | --- |
|  | Male | Clothing | 1181 |
|  | Male | Footwear | 400 |
|  | Male | Outerwear | 223 |
|  | Male | Accessories | 848 |
|  | Female | Clothing | 556 |
|  | Female | Outerwear | 101 |
|  | Female | Accessories | 392 |
|  | Female | Footwear | 199 |

-- Looking at this table above there are various categories of product scattered across the two genders. This analysis shows that the males tend to purchase more clothing than the female, having a total of 1181 purchases compared to that of the female which is 556 purchases. The footwear category also falls to the male having a significant higher purchase than that of the female. After much analysis to this, it clearly shows that the male then to out purchase the female, having a total purchase of **2652** across all product categories, leaving the female with **1248.**

|  |  |
| --- | --- |
| Male | 59.5362 |
| Female | 60.2492 |

* **Is there a difference in average spend by gender?**

-- Yes, this clearly shows that the Females tends to spend more than the Males, males might have a higher item purchased but female items from this analysis tend to be more expensive leaving the female with a higher average spend across all items and the difference between the average spend of both genders is **0.713**

**💳 Purchase & Payment Analysis**

* **Which payment method is most popular in each location?**

|  |  |  |
| --- | --- | --- |
| Alabama | Debit Card |  |
| Alaska | Credit Card |  |
| Arizona | Debit Card |  |
| Arkansas | Cash |  |
| California | PayPal |  |
| Colorado | Bank Transfer and credit card |  |
| Connecticut | PayPal and cash |  |
| Delaware | Venmo |  |
| Florida | Credit Card and PayPal |  |
| Geogia | Credit card |  |
|  |  |  |

-- This trend clearly shows that this business uses varieties of payment methods which is a good thing for this organization because having one payment method can be frustrating thereby losing potential customers to the competition. Analysis shows that in the United States, this particular shop has branches across many states and for each state there are different payment methods, we can deduce that in Arizona, from all the different payment methods present at that shop, Debit card are frequently used, making it popular in that particular region but in Geogia, shopper tend to make use of credit cards even more. **RUN QUERY FOR MORE STATES AND THEIR MOST POPULAR PAYMENT METHOD.**

* **How does the use of discounts and promo codes affect average purchase amounts?**

|  |  |  |
| --- | --- | --- |
|  |  |  |
| **Discount** | **Promo Code** | **Avg. Spend** |
| Yes | Yes | 59.2791 |
| No | No | 60.1305 |

-- Customers who have discounts or promos due to their regular shopping tend to spend less than first timer customers or customers who do not have any promo or discounts and this will help monitor the effect of those discounts on a customer’s purchase.

* **What is the average number of previous purchases per payment method?**

|  |  |
| --- | --- |
| **Payment method** | **Avg\_Previous\_Purchase** |
| Venmo | 25.6451 |
| Cash | 25.2537 |
| Credit Card | 25.5887 |
| PayPal | 25.5096 |
| Bank Transfer | 24.5016 |
| Debit Card | 25.5613 |

-- This clearly shows that customers who use Venmo have a higher previous purchase.

* **Is there a relationship between purchase amount and frequency of purchases?**

|  |  |
| --- | --- |
| **Frequency of Purchase** | **Avg\_Spend** |
| Fortnightly | 59.0535 |
| Weekly | 58.9722 |
| Annually | 60.1731 |
| Quarterly | 59.9840 |
| Bi-Weekly | 60.6947 |
| Monthly | 59.3309 |
| Every 3 Months | 60.0822 |

-- Customers who shop less frequently (e.g., Bi-Weekly, Annually) tend to spend more per purchase than those who shop more often (like Weekly or Fortnightly).

**🧥 Product & Seasonal Trends**

* **Which product categories are most popular in each season?**

|  |  |
| --- | --- |
| **Season** | **Category** |
| Fall | Clothing |
| Spring | Clothing |
| Summer | Clothing |
| Winter | Clothing |

-- **Clothing** is more popular across all seasons.

* **What is the most purchased item-size-color combinations?**

Check SQL syntax.

* **Which items generate the highest average revenue?**

| Item Purchased | Avg \_Revenue |
| --- | --- |
| T-shirt | 62.91 |
| Boots | 62.63 |
| Dress | 62.17 |
| Shoes | 61.60 |
| Shirt | 61.14 |
| Scarf | 60.90 |
| Blouse | 60.88 |
| Hat | 60.88 |
| Jeans | 60.87 |
| Gloves | 60.55 |

--**T-shirts**, **Boots**, and **Dresses** generate the highest average revenue, making them key drivers for sales focus or promotional strategies.

* **How does seasonality impact product demand?**

**Clothing consistently dominates** demand across all seasons, especially in **Spring**.

**Accessories** also perform strongly year-round.

**Outerwear** sees less demand, ​

**🚚 Shipping & Logistics**

* **Which shipping type is used most frequently?**

-- **FREE SHIPPING** is the type of shipping that is used frequently by customers, with **675** purchases to be delivered.

* **Does shipping type correlate with higher or lower purchase amounts?**

| **Shipping Type** | **Avg Purchase Amount (USD)** |
| --- | --- |
| **Day Shipping** | **60.73** |
| Express | 60.48 |
| Free Shipping | 60.41 |
| Store Pickup | 59.89 |
| Next Day Air | 58.63 |
| Standard | 58.46 |

Customers who choose **2-Day Shipping**, **Express**, and **Free Shipping** spend more on average, while **Standard** and **Next Day Air** users spend the least.

* **Are certain shipping methods more common among frequent purchasers?**

| **Shipping Type** | **Frequency of Purchases** | **Count** |
| --- | --- | --- |
| Free Shipping | Annually | 112 |
| Free Shipping | Weekly | 110 |
| Next Day Air | Every 3 Months | 109 |
| Standard | Fortnightly | 107 |
| Standard | Annually | 107 |

-- **Free Shipping** is popular with both **annual** and **weekly shoppers**, showing broad appeal.

-- Next **Day Air** and **Standard** are favored among **moderately frequent buyers**, such as **Fortnightly** or **Quarterly**.

**⭐ Customer Satisfaction**

* **Which product categories receive the highest average review ratings?**

| **Category** | **Avg Review Rating** |
| --- | --- |
| **Footwear** | **3.79** |
| Accessories | 3.77 |
| Outerwear | 3.75 |
| Clothing | 3.72 |

-- **Footwear** stands out with the **highest customer satisfaction**, while **Clothing** has the lowest average review rating among the categories.

* **Is there a trend between the number of previous purchases and review ratings?**

| **Previous Purchases** | **Avg Review Rating** |
| --- | --- |
| 1 | 3.84 |
| 2 | 3.72 |
| 3 | 3.82 |
| 4 | 3.74 |
| 5 | 3.81 |
| 6 | 3.73 |
| 7 | 3.82 |
| 8 | 3.78 |
| 9 | 3.86 |
| 10 | 3.68 |

-- There isn’t a perfectly linear trend, but customers with **higher numbers of previous purchases** (especially 9) tend to leave **slightly better reviews**, suggesting **loyal customers may be more satisfied** overall.

* **How does review rating vary across seasons?**

| **Season** | **Avg Review Rating** |
| --- | --- |
| **Spring** | **3.79** |
| Winter | 3.75 |
| Fall | 3.73 |
| Summer | 3.73 |

-- **Spring** receives the **highest average review ratings**, while **Summer and Fall** see slightly lower satisfaction from customers.

* **Do customers using certain payment methods leave better reviews?**

| **Payment Method** | **Avg Review Rating** |
| --- | --- |
| **Credit Card** | **3.78** |
| Debit Card | 3.76 |
| Venmo | 3.75 |
| Cash | 3.75 |
| PayPal | 3.75 |
| Bank Transfer | 3.70 |

-- Customers who pay with **Credit Cards** tend to leave slightly **higher average review ratings**, while those using **Bank Transfers** leave the **lowest ratings** on average.