**Walmart Customer Purchase Behavior Dashboard**

**📊 1. Overview Section (Executive Summary)**

* **Total Revenue** (monthly/quarterly)
* **Total Customers** (unique buyers)
* **Average Basket Size**
* **Average Transaction Value**
* **Purchase Frequency**

Quick snapshot to assess overall performance.

**👥 2. Customer Segmentation**

**Charts**:

* Pie or bar chart of **Customer Types**:
  + New vs. Returning Customers
  + Loyalty tier (e.g., Bronze, Silver, Gold)
* Bar chart of **Purchase Frequency** by segment
* Heatmap of **Geographic Segments** (ZIP code or region)

**🛒 3. Product Affinity & Basket Analysis**

**Charts**:

* Market Basket Analysis (e.g., heatmap of common co-purchases)
* Top 10 product pairs bought together
* Average basket value by product category

**KPIs**:

* Cross-sell and up-sell conversion rates

**📍 4. Channel Performance**

**Metrics per channel (In-store, Online, App):**

* Conversion Rate
* Avg Order Value
* Bounce Rate (for online)
* Repeat Visit Rate

**Charts**:

* Line chart: revenue trend by channel
* Bar chart: orders per device (desktop/mobile/app)

**💵 5. Discounts & Promotions**

* % of transactions with discount
* Avg basket size with vs. without promotion
* Revenue uplift from promotions
* Customer segment most responsive to discounts

**Visualization**:

* Funnel or bar charts comparing full-price vs. discounted behaviors

**🔁 6. Customer Retention & Loyalty**

* Retention Rate (monthly or quarterly)
* Churn Rate
* Repeat Purchase Rate
* Average Time Between Purchases
* Customer Lifetime Value (CLV) distribution

**📆 7. Time-Based Trends**

* Line charts:
  + Daily/weekly/monthly revenue trends
  + Purchase frequency over time
  + Shopping time-of-day or day-of-week patterns

**📌 8. Actionable Insights Section**

* “Customers who bought X also bought Y”
* “Top 5 high-value segments”
* “Most responsive regions to promotions”
* “Underperforming product categories”

**🛒 1. Average Basket Size (Units per Transaction)**

* **Definition**: Average number of items bought per transaction.
* **Insight**: Indicates buying behavior—whether customers buy in bulk or make smaller, frequent purchases.

**💵 2. Average Transaction Value (ATV)**

* **Formula**: Total revenue / Number of transactions
* **Insight**: Measures how much a customer typically spends per visit.

**👥 3. Customer Retention Rate**

* **Definition**: Percentage of customers who return to shop again within a specific time period.
* **Insight**: Reflects customer loyalty and satisfaction.

**🔁 4. Purchase Frequency**

* **Formula**: Total number of purchases / Number of customers
* **Insight**: Shows how often customers shop at Walmart.

**🧍‍♂️🧍‍♀️ 5. Customer Segmentation Metrics**

* Segments might include:
  + **First-time vs. returning customers**
  + **In-store vs. online shoppers**
  + **High-value vs. low-value customers**
* **Insight**: Tailors marketing and product strategy to different customer types.

**📦 6. Product Affinity / Market Basket Analysis**

* **Definition**: Measures which products are often purchased together.
* **Insight**: Supports cross-selling and promotions (e.g., if people buy bread, they also buy butter).

**🕒 7. Time Between Purchases (Customer Reorder Time)**

* **Insight**: Indicates product lifecycle or urgency of repurchase (important for consumables).

**📈 8. Revenue per Customer (Customer Lifetime Value - CLV)**

* **Formula**: Average order value × Purchase frequency × Retention period
* **Insight**: Predicts future value of a customer relationship.

**💳 9. Discount Dependency**

* **Definition**: Percentage of transactions made using promotions or discounts.
* **Insight**: Helps understand customer price sensitivity.

**🌐 10. Channel Performance Metrics**

* Compare:
  + **In-store vs. Online conversion rates**
  + **Mobile vs. Desktop usage**
* **Insight**: Identifies how customer behavior differs across shopping channels.

**📍 11. Geo-Based Behavior**

* Track performance by region, city, or ZIP code.
* **Insight**: Adapts inventory and promotions to local demand.