Task Overview: Customer Profiling & Persona Development Visualization (Expanded)

Objective: Create a responsive, data-driven single-page application that provides in-depth visual insights into customer profiling, preferences, and behavioral patterns. This part of the project will focus on Descriptive Statistics and Customer Preferences & Rituals sections, using interactive charts to summarize key metrics and highlight customer behaviors.

Task Requirements:

1. Descriptive Statistics: Summarize Key Metrics

- **Dashboard Summary:**

    o **Design: Create a top-of-page summary displaying key performance indicators (KPIs).**

    o **Charts:**

        ▪ **Bar Chart: Show Customer Lifetime Value (CLV) across segments.**

        ▪ **Line Chart: Track changes in average spend over time.**

        ▪ **Gauge Chart: Display KPIs like transaction frequency and average customer spend.**

- **Pareto Chart (80/20 Rule):**

    o **Purpose: Highlight how a small percentage of customers contribute to a large portion of revenue.**

    o **Chart Details:**

        ▪ **Bars represent revenue by customer segment, while the cumulative revenue line shows the 80/20 distribution.**

    o **Fields Required: Revenue per customer and customer segments.**

- **Funnel Chart (Customer Journey Analysis):**

    o **Purpose: Visualize customer journey steps, identifying drop-off points or effective stages.**

    o **Chart Details:**

        ▪ **Each stage (e.g., visits, add to cart, purchase) is represented in a descending funnel to illustrate conversions.**

    o **Fields Required: Customer count per stage (e.g., views, cart adds, purchases).**

- **Customer Retention Rate:**

    o **Purpose: Show retention trends over time.**

    o **Chart Type: Line chart.**

    o **Fields Required: Repeat customers, total customers at period start.**

- **Churn Rate:**

  - **Purpose: Track the rate at which customers stop purchasing.**

  - **Chart Types: Gauge or bar chart.**

  - **Fields Required: Total customers lost and initial customer base.**

- **Repeat Purchase Rate (RPR):**

  - **Purpose: Measure repeat purchase behavior.**

  - **Chart Types: Line or bar chart.**

  - **Fields Required: Customers with multiple purchases, total customers.**

- **Revenue per Customer:**

  - **Purpose: Track revenue per customer over time.**

  - **Chart Type: Line chart.**

  - **Fields Required: Total revenue and customer count.**

2. Customer Preferences & Rituals

- **Stacked Bar Chart (Preferences Breakdown):**

  - **Purpose: Display customer preferences (e.g., products, payment methods) across segments.**

  - **Fields Required: Customer segments, product preferences, payment methods.**

- **Heatmap (Frequency of Rituals or Habits):**

  - **Purpose: Visualize the frequency of customer rituals (e.g., shopping time).**

  - **Fields Required: Shopping timeframe, purchase frequency, engagement with events.**

- **Pie/Donut Chart (Preferences by Category):**

  - **Purpose: Show the distribution of customer preferences, like delivery and communication choices.**

  - **Fields Required: Delivery preferences, communication methods, shopping frequency.**

- **Line Chart (Seasonality of Rituals):**

  - **Purpose: Display seasonal trends or changes in rituals.**

  - **Fields Required: Time period, transaction volume, product preference.**

- **Clustered Bar Chart (Preferences vs. Rituals):**

  - **Purpose: Compare preferences with ritual patterns (e.g., weekend vs. weekday shopping).**

- o   **Fields Required: Shopping frequency, product preferences, payment methods.**

- **Funnel Chart (Engagement with Rituals):**

  - o   **Purpose: Visualize drop-off rates in ritual engagement (e.g., browsing to purchase).**

  - o   **Fields Required: Customer engagement at each ritual stage.**

- **Word Cloud (Common Customer Rituals or Preferences):**

  - o   **Purpose: Highlight frequently mentioned preferences or habits.**

  - o   **Fields Required: Transaction logs, survey keywords.**

- **Scatter Plot (Preferences vs. Frequency):**

  - o   **Purpose: Show correlation between preferences and purchase frequency.**

  - o   **Fields Required: Shopping frequency and product or brand preferences.**

- **Spending and Saving:**

  - o   **Histogram: Visualize spending frequency in specific ranges.**

  - o   **Pareto Chart: Emphasize high-spending customers.**

  - o   **Pie/Donut Chart: Compare savings and spending ratios.**

  - o   **Stacked Area Chart: Track savings and spending trends over time.**

Design Requirements:

- **Ensure responsiveness across devices for all charts and layouts.**

- **Incorporate intuitive, dynamic charts for a clear, engaging user experience.**

Note: The project link with assets is available in this link:

https://drive.google.com/file/d/1isSu5O9o0diqI70WUpmAjZtZpKm28JZa/view?usp=sharing .