**Customer Feedback Analytics Dashboard**

**Project Overview**

The **Customer Feedback Analytics Dashboard** is an interactive data visualization tool developed in **Power BI** to analyze customer experiences and satisfaction levels for a hotel. This dashboard helps stakeholders monitor customer sentiment, identify trends, and make **data-driven decisions** to enhance service quality.

By leveraging **customer feedback data**, the dashboard provides insights into key metrics such as **overall ratings, Net Promoter Score (NPS), feedback categories (room, restaurant, facilities, staff), visit purposes, and information sources**. The interactive visualizations allow users to drill down into specific areas of customer experience, helping hotel management improve guest satisfaction and business performance.

**Features and Functionalities**

**1. Key Performance Indicators (KPIs)**

The dashboard provides a high-level summary of key customer experience metrics:

* **Overall Rating**: Displays the average customer rating out of 5.
* **Net Promoter Score (NPS)**: Measures customer loyalty by classifying customers into:
  + **Promoters (9-10)** – Highly satisfied customers who are likely to recommend the hotel.
  + **Passives (7-8)** – Neutral customers who are satisfied but not enthusiastic.
  + **Detractors (0-6)** – Dissatisfied customers who may discourage others from staying.

**2. Purpose of Visit Analysis**

* Categorizes customer visits into **Business, Vacation, Function, and Others**.
* Helps the hotel tailor services and offers to different customer segments.

**3. Customer Demographics – Gender Distribution**

* Visual representation of the percentage of **male and female** customers.
* Useful for understanding guest demographics and designing targeted marketing campaigns.

**4. Customer Feedback Breakdown**

A detailed analysis of customer ratings across four key service areas:

* **Facilities** (e.g., hotel ambiance, amenities)
* **Restaurant** (e.g., food quality, dining experience)
* **Room** (e.g., cleanliness, comfort)
* **Staff** (e.g., customer service, professionalism)

Each category is visualized using **bar charts, heatmaps, and sentiment analysis** to highlight areas for improvement.

**5. Source of Information Analysis**

* Identifies how customers discovered the hotel, including:
  + **Hotel Booking Sites**
  + **Word of Mouth**
  + **Internet Ads**
  + **Search Engines**
* Helps the marketing team optimize ad spending and improve customer outreach strategies.

**6. Source Trend Analysis**

* Tracks the trend of **customer acquisition sources** over time using line charts.
* Assists in evaluating which marketing channels are most effective in bringing new customers.

**Visualization Techniques Used**

**1. Power BI Visualizations**

* **Bar Charts** – Used for visualizing ratings across different feedback categories.
* **Line Charts** – Show trends in customer acquisition sources over time.
* **Pie Charts** – Represent gender distribution and visit purposes.
* **Heatmaps** – Identify areas of high and low customer satisfaction.

**2. DAX (Data Analysis Expressions)**

* **SUM, AVERAGE, and COUNT functions** to calculate key metrics.
* **IF() and SWITCH() functions** for conditional formatting (e.g., highlighting low satisfaction scores).
* **RANKX() function** to rank feedback scores and NPS contributors.

**3. Power Query for Data Transformation**

* **Data Cleaning**: Removed duplicate entries, handled missing values.
* **Data Grouping**: Binned ratings into different satisfaction levels (High, Medium, Low).

**4. Interactive Filters and Navigation**

* **Slicers**: Allow users to filter data by customer segments, feedback categories, and time periods.
* **Bookmarks & Buttons**: Enable smooth navigation between different dashboard sections.

**How to Use the Dashboard**

**Step 1: Analyze Customer Satisfaction**

* Check the **Overall Rating and NPS Score** to assess customer satisfaction.
* Identify the percentage of Promoters, Passives, and Detractors.

**Step 2: Identify Areas for Improvement**

* Review **feedback scores** for Facilities, Restaurant, Room, and Staff.
* Use the heatmap to pinpoint areas needing attention.

**Step 3: Understand Customer Demographics**

* Use the **Gender Distribution** chart to understand customer profiles.
* Check the **Purpose of Visit** chart to see why guests stay at the hotel.

**Step 4: Evaluate Marketing Effectiveness**

* Check the **Source of Information Analysis** to see where customers are learning about the hotel.
* Monitor **Source Trend Analysis** to track changes in customer acquisition over time.

**Step 5: Apply Filters for Deeper Insights**

* Use the **region, gender, visit purpose, and time filters** to get more specific insights.

**Future Enhancements**

1. **Sentiment Analysis Integration**
   * Implement **Natural Language Processing (NLP)** to analyze customer comments and reviews.
2. **Predictive Analytics for Customer Experience**
   * Use **machine learning models** to forecast customer satisfaction trends based on historical data.
3. **Real-Time Feedback Tracking**
   * Integrate live feedback collection from hotel management systems for real-time analysis.
4. **Customer Segmentation**
   * Classify customers based on behavior patterns to offer personalized services.

**Conclusion**

The **Customer Feedback Analytics Dashboard** is a powerful tool that enables hotel management to:

* Monitor guest satisfaction effectively.
* Identify key areas for improvement.
* Optimize marketing strategies.
* Improve overall customer experience.