**Interactive Tableau Dashboard:**

**River Pool Holidays Tours & Travels**

**Project Introduction:**

This interactive Travel Insights Dashboard uses Tableau to uncover trends in customer bookings, travel destinations, and package preferences. Designed to give travel companies a competitive edge, this dashboard visualizes essential data metrics, offering actionable insights into customer behaviours and key destinations.

**Project Objective:**  
The objective of this dashboard is to showcase essential travel metrics through an intuitive and interactive interface. With features like lollipop charts for top destinations, motion charts for package type performance, customer satisfaction, trip bookings and payment preferences and KPIs that track real-time booking trends, this dashboard enables clear and powerful analysis of travel patterns.

**Business Objective:**  
In an industry where adapting to customer preferences is key, this dashboard helps travel companies:

* **Identify Popular Destinations:** Understand trending domestic and international destinations to tailor marketing and promotions.
* **Identify Satisfaction Trends:** Analyse customer feedback to highlight overall satisfaction with travel experiences.
* **Optimize Product Offerings:** By understanding preferences, popular destinations, and travel packages, travel companies can tailor offerings to meet customer demand.
* **Enhance Decision-Making:** Support business leaders with data-driven insights for enhancing customer experience, refining package offerings, and identifying top-performing locations.
* **Enhance Revenue Strategies:** By visualizing booking trends and travel preferences, companies can optimize offerings, pricing, and timing for increased sales.

**Dataset Overview: Travel and Tourism Analytics**

The dataset includes several tables capturing essential travel data points, with each table designed to focus on different aspects of customer interactions, bookings, and satisfaction:

* **Customers Table**
* **Columns**: Customer\_ID, Customer\_Name, Age, Gender, City, Country, Email, Phone\_Number
* **Description**: Contains personal details of customers, including demographics such as age, gender, and location, which are key for analysing travel preferences by different customer segments.
* **Bookings Table**
* **Columns**: Booking\_ID, Customer\_ID, Destination \_ID, Sales\_ID, Package\_ID, Booking\_Date, Travel\_Start\_Date, Travel\_End\_Date, Destination, Package\_Type, Package\_Name, Number\_of\_Travelers, Total\_Cost, Mode\_of\_Travelling
* **Description**: Records each travel booking with details on destinations, travel dates, number of travellers, and total costs, providing insights into popular travel seasons and booking trends.
* **Travel package Table**
* **Columns**: Package\_ID, Package\_Name, Package\_Type, Price\_per\_person, Duration
* **Description**: Provides details for each travel package offered, including the type, price per person, and duration of the package, which supports analysis of popular package types, pricing trends, and customer preferences by package.
* **Destinations Table**
* **Columns**: Destination\_ID, Destination\_Name, Region\_ID
* **Description**: Details on each travel destination with location enabling destination trend analysis and identifying top-performing regions.
* **Region Table**
* **Columns**: Region\_ID, Region\_Name
* **Description**: Lists the regions covered in the travel data, enabling regional analysis of travel trends, preferences, and destination popularity
* **Feedback Table**
* **Columns**: Feedback\_ID, Booking\_ID, Customer\_ID, Satisfaction\_Category, Comments, Feedback\_Date, Feedback\_Ratings.
* **Description**: Records customer feedback after each booking, categorizing satisfaction levels and capturing any additional comments. This data helps in assessing customer satisfaction for various travel packages, destinations, and booking periods, making it easier to identify trends and areas for improvement.
* **Sales Table**
* **Columns**: Sales\_ID, Booking\_ID, Sale\_Amount, Payment\_Method, Payment\_Date, Profit\_Margin.
* **Description**: Contains financial transaction details for each booking, including payment method and profit margin, which can help analysed preferred payment modes and revenue contributions by booking.

**Data Preparation**

**Objective:**  
Prepare the dataset by efficiently loading and cleaning data, removing duplicates, filling missing values, and ensuring consistency. Add new columns like *Mode\_of\_Travelling*, *Feedback Rating*, and standardized date fields to enhance data usability and support detailed analysis.

**1. Data Loading and Cleaning**

* **Data Loading**:
  + - Import travel data tables into Excel using **File > Open** and ensure each dataset (e.g., Customers, Bookings, Feedback) is in a separate sheet or organized as required.
* **Data Cleaning**:
  + - **Remove Duplicates**: Use **Data > Remove Duplicates** to eliminate any duplicate rows based on unique identifiers like Booking\_ID or Customer\_ID.
    - **Handle Blanks and Errors**: Use **Find & Replace** or conditional formatting to highlight or fill in blanks or correct common errors (e.g., spelling, case inconsistencies).

**2. Add New Columns**

* **Mode of Travelling**
  + - Added a new column called **Mode\_of\_Travelling**, using following formula in Excel based on destination type:
    - Formula (assuming destination type in cell A2):

=IF(A2="international", "plane", "train")

* **Explanation**: If the destination type is "international," the formula will return "plane"; otherwise, it will return "train."
* **Feedback Rating**
  + - Added a new column called **Feedback\_Rating** to translate Satisfaction\_Category into a rating scale. This formula will generate random ratings based on satisfaction level.
    - Formula (assuming satisfaction category is in cell D2):

=IF(D2="Excellent", RANDBETWEEN(9,10), IF(D2="Good", RANDBETWEEN(7,8), IF(D2="Average", RANDBETWEEN(5,6), IF(D2="Poor",RANDBETWEEN(3,4), ""))))

* **Explanation**: For each satisfaction category:
  + "Excellent" gets a rating of 9–10.
  + "Good" gets a rating of 7–8.
  + "Average" gets a rating of 5–6.
  + "Poor" gets a rating of 3–4.
* **Replace Year in Date Column**
  + - update only the year in a date column (e.g., set all dates to 2023 while keeping the month and day), use the following formula:
    - Formula (assuming the original date is in cell A2):

=DATE(2023, MONTH(A2), DAY(A2))

* **Explanation**: This formula uses 2023 as the year and keeps the original month and day values from A2.

**Dashboard Overview:**

**Overview of the Trip Highlights Dashboard**

The **Trip Highlights** dashboard provides a comprehensive view of key travel statistics and top destination trends, allowing for a quick assessment of business performance and popular destinations. Here's a breakdown of the sections and metrics shown:

1. **Top Navigation Tabs**:
   * The dashboard features easy-to-navigate tabs like **Home**, **Trip Highlights**, **Tourist Analysis**, and **Tour Cost Analysis**, allowing users to switch between different views for a deeper understanding of various aspects of the travel data.
2. **KPI Cards**:
   * **Total Bookings**: Displays the total number of bookings (159), providing insight into overall booking volume.

Created a calculated field for the total booking KPI card:

{FIXED : COUNT([Booking ID]) }

This fixed LOD expression you've provided helps calculate the total number of bookings by counting the unique Booking ID

* + **Total Travelers**: Shows the total number of travelers (459), highlighting the reach of travel services.
  + **Total Trips by Transportation Mode**: Breaks down trips by transportation type with icons for **Car (14)**, **Train (67)**, and **Plane (78)**, giving a clear picture of preferred travel methods.

Created a calculated field for the total booking KPI card:

IF [Mode of Travelling] = 'Car' THEN [Destination] END

IF [Mode of Travelling] = 'Plane' THEN [Destination] END

IF [Mode of Travelling] = 'Train' THEN [Destination] END

1. **Top 5 Destinations by Booking**:
   * A lollipop chart ranks the top 5 destinations by the number of bookings, with **Jaipur, India** leading with 11 bookings, followed by destinations like **Goa, India** and **Bali, Indonesia**. This helps identify popular locations and guide marketing efforts towards high-demand destinations.
   * Added image tooltips to a lollipop chart when users hover over a city in the chart.

Which makes impressive such as

**Enhanced User Engagement**: Visual elements can capture users' attention more effectively than text alone.

**Improved Data Understanding**: Images can provide immediate context and help users quickly identify and differentiate between destinations.

**Aesthetically Pleasing**: It makes the dashboard more visually appealing and professional.

1. **Most Expensive Destinations**:
   * A visual display showcases the destinations with the highest sales figures. Each destination has an image, name, and total sales amount, with **Bali, Indonesia** leading at ₹2,990.00K. This section aids in analysing high-revenue destinations and adjusting packages for higher profitability.
2. **Filters**:
   * On the left side, interactive filters like **Month**, **Age Group Range**, and **Package Type** allow users to customize the dashboard view based on specific criteria, making it easier to segment and analysed data by different demographics and seasonal trends.

**Overview of Tourist Analysis Dashboard**

1. **Tourist Demographics**:
   * **Gender Distribution**: Breakdown of tourists by gender (e.g., Male: 52.2%, Female: 47.8%).

**Created Calculated fields like**

COUNT(IF [Gender] = "Male" THEN 1 END) / COUNT([Gender])

COUNT(IF [Gender] = "Female" THEN 1 END) / COUNT([Gender])

* + **Age Distribution**: Distribution of tourists across different age groups (e.g., 20s, 30s, 40s, etc.).

Create Bins for Age Group Ranges with Size of 10 bins

1. **Customer Satisfaction**:
   * 1. **Customer Satisfaction Gauge**: Visual representation of overall customer satisfaction levels (e.g., average satisfaction level of 31.98%).

**First created a parameter as**: Satisfaction Category Parameter

**Then Created Calculated field :**

**feedback rating %:**

SUM([Feedback Rating])/WINDOW\_MAX(SUM([Feedback Rating]))

**X\_Gauage:** IIF(ATTR([Satisfaction Category])= [Satisfaction Category Parameter],1+SQRT(2)\*COS((1-[fedback rating %])\*180\*PI()/180),1)

**Y\_Gauge:** IIF(ATTR([Satisfaction Category])=[Satisfaction Category Parameter],1+SQRT(2)\*SIN([fedback rating %]\*180\*PI()/180),1)

* + 1. **Feedback Ratings**: Average feedback ratings (e.g., 6.918 out of 10).

**Created Calculated field :**

**For Average feeback**: AVG([Feedback Rating])

**For non-Average feeback:** 1 - (COUNT(IF [Feedback Rating] = 10 THEN [Booking ID (Feedback table )] END) / COUNT([Booking ID (Feedback table )]))

1. **Tourist Preferences**:
   * **Package Type Preferences**: Breakdown of tourists' preferences for different types of travel packages (e.g., International: 35.73%, Historical: 13.29%, Beach: 10.46%, etc.).
2. **Customer Satisfaction by Ratings**:
   * **Ratings Distribution**: Distribution of customer satisfaction ratings (e.g., Excellent: 100% with a rating of 9.6, Good: 72.28% with a rating of 7.4, Average: 31.98% with a rating of 5.6, Poor: 30.28% with a rating of 3.8).

**Overview for Tour Cost Analysis Dashboard**

1. **Total Sales**:
   * **Total Sales Amount**: ₹47,130K.
   * **Growth**: There is a significant increase of 288.9% compared to the previous year.
   * **Visualization**: A bar chart displays monthly sales data for easy comparison and trend analysis.
2. **Expense Breakdown**:
   * **Transportation Type**: A pie chart shows the distribution of expenses by transportation type:
     + **Train**: ₹14M
     + **Car**: ₹2M
     + **Plane**: ₹43M
     + **Total Expenses**: ₹59M
3. **Year-wise Profitability by Package Type**:
   * **Table**: A table provides a detailed look at the profit margin and sales amount for different package types in 2023 and 2024

**Create calculated field**

* + - Profitability: SUM([Profit Margin])/SUM([Sales Amount])

1. **Sales vs. Profit by Package Type and Destination**:
   * **Bar Chart**: A bar chart compares sales and profit for various destinations.
2. **Payment Mode Distribution**:
   * **Circular Chart**: A circular chart illustrates the distribution of payment modes among tourists:
     + **Credit Card**: 18.55%
     + **Debit Card**: 14.16%
     + **Bank Transfer**: 10.60%
     + **Cash**: 6.69%

* + - **First created Path bins for sales**
    - **Then created calculated fields:**
      1. **PI: 3.141926**
      2. **Rank\_max: WINDOW\_MAX([Rank])**
      3. **X\_Coordinate: COS ((INDEX ()-1) \*[Pi]/180)\*[Rank max]**
      4. **Y\_Coordinate: COS ((INDEX ()-1) \*[Pi]/180)\*[Rank max]**