Customer Analysis Report

Traveling is unique, traveling is an expression of individuality and a journey to self awareness. Creating memories on a budget or at all cost depends on the outreach of whomever needs it. This is why a tailor made itinerary to meet customers expectation is paramount.

Elena, the head of marketing has a mission to execute an outstanding personalized reward program that keeps customers returning to the TravelTide platform. She requires a data analyst to find strategies to leverage the customer journey and keep them onboard.
The reward program had perks to get customers to adhere to it.

The first step for us was to enhance the branding to "Colorful Traveltide Agency" as it reflects our commitment to offering a vibrant and diverse range of travel experiences. The term "Colorful" signifies the rich, varied, and exciting adventures we curate for our clients, ensuring that every journey is unique and filled with memorable moments. This rebranding emphasizes our focus on creating personalized, dynamic travel itineraries that cater to the diverse interests and preferences of our travelers, aligning with our mission to provide more than just a trip, but a truly immersive and colorful travel experience.

To achieve this, it is essential to familiarize with the data set to find out behavioral characteristics of the customers and segment them into different categories with assigned allocated perks to help organize the metrics.

Perks

- Kids free hotel meal
- Free lounge access
- No cancellation fee
- 10% on Group Booking Discount on hotels and flights
- Safari adventure for 2
- Free WiFi and Roaming Connection

Perks do not have equal importance to each customer which makes it obvious to point out the persona types:

1. **Business Traveler**: Prioritizes efficiency and comfort, seeks convenient locations, high-speed internet, and business amenities.
2. **Couple**: Prefers romantic and intimate settings, enjoys fine dining, cultural experiences, and scenic destinations.
3. **Family**: Looks for family-friendly activities, spacious accommodations, and safe environments suitable for children.
4. **Family2**: Similar to Family1 but with a focus on extended stays, educational activities, and value for money.

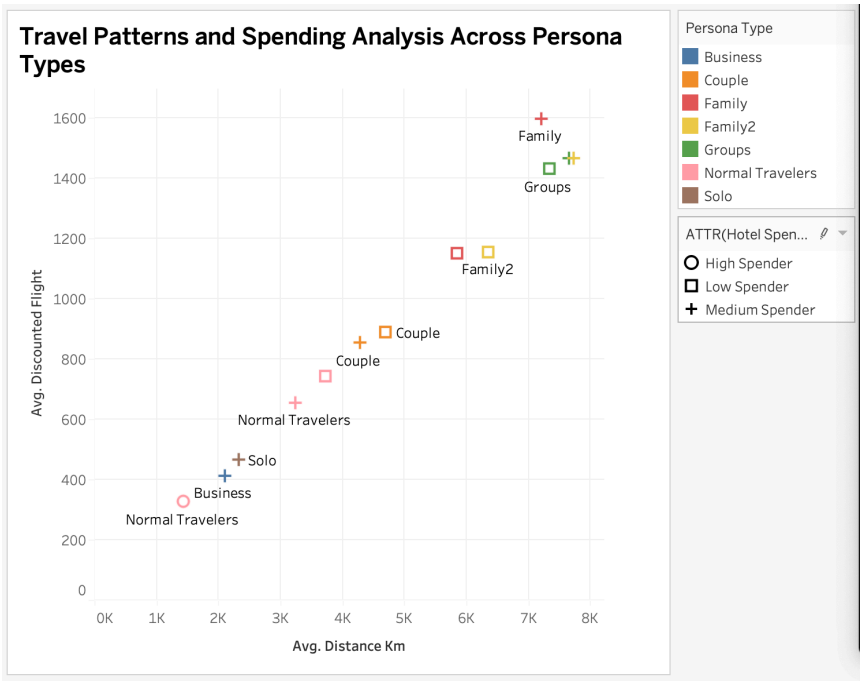
5. **Groups**: Interested in social activities, group discounts, and versatile itineraries that accommodate diverse interests.
6. **Normal Travelers**: Enjoys standard travel experiences, balanced between relaxation and exploration, often on a moderate budget.
7. **Solo Traveler**: Seeks adventure and self-discovery, prefers flexible schedules, and engaging with local cultures and communities.

To draw attention to customers, they were segmented based on their persona types and allocated perks using SQL. This structure makes it clear how customer segmentation is used to personalize perks based on their travel persona, enhancing customer satisfaction and loyalty.

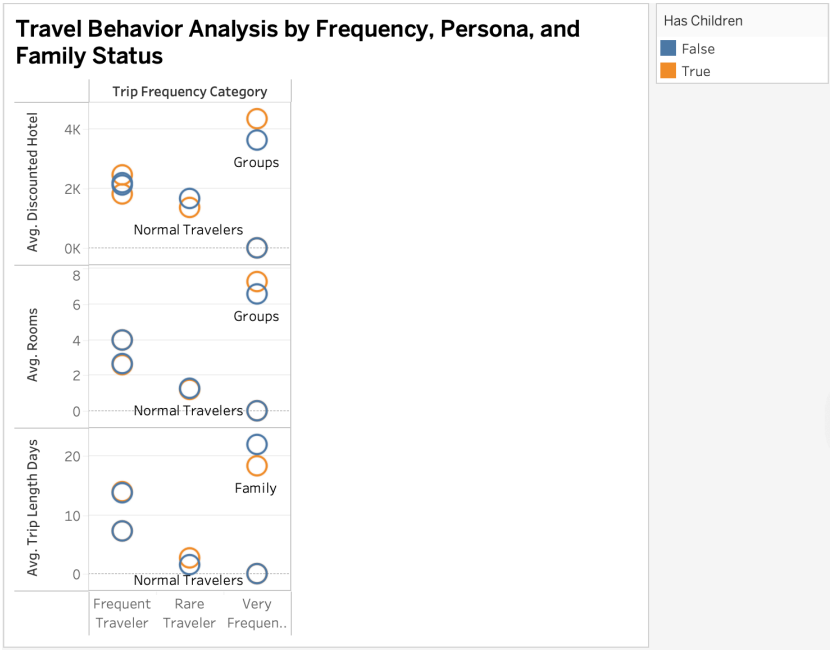
Each persona_type is allocated specific perks that cater to their preferences:

- Solo: Free WiFi and Roaming Connection
- Business: Free lounge access
- Family: No cancellation fees
- Family2: Kids free meal
- Groups: 10% discount on Group Booking for hotels and flights
- Couple: Safari adventure for 2

The dataset was subsequently uploaded to Tableau for analysis and visualization of persona travel behavior, focusing on factors such as pricing trends, booking modalities, spending habits in relation to distance traveled, travel frequency, and family status.



The first graph demonstrates a distinct relationship between the distance traveled and the spending on discounted flights across various persona types. It shows that family and group travelers tend to travel the furthest and spend the most on flights, while business travelers, despite being high spenders on hotels, travel shorter distances and spend less on discounted flights.



Building on this, the second graph further analyzes travel behavior by examining the frequency of travel, persona types, and family status. It reveals that groups, particularly those without children, have higher spending on discounted hotels and book more rooms, while families, especially those with children, tend to have longer trip lengths. This combined analysis underscores how travel patterns and spending habits vary not only by persona types but also by trip frequency and family status.

This insight highlights the value of these segments, as they are likely to keep returning to the program.

By gathering data to reduce uncertainty and introducing bias to shape solutions that suit customers best, we can focus on families, groups, and normal travelers who prefer cost-effective options.

To gauge the success of customer analysis, track retention rates, use satisfaction surveys for feedback, monitor booking and spending trends, measure campaign conversion rates, and employ Net Promoter Score (NPS) for loyalty assessment. Continuous iteration based on real-time data and feedback ensures services stay competitive, fostering sustained growth and customer satisfaction.

TravelTide SQL QUERY

```
WITH filtered_users AS

( SELECT user_id, COUNT(*) from sessions s

 where s.session_start > '2023-01-04'

 GROUP BY user_id

 HAVING count(session_start)>7

 ),

session_base AS (select  s.session_id, s.user_id, s.trip_id, s.session_start, s.session_end,

 EXTRACT(EPOCH FROM (session_end - session_start)) AS session_duration,

 s.page_clicks,  s.flight_discount, s.flight_discount_amount, s.hotel_discount,
s.hotel_discount_amount,

  s.flight_booked, s.hotel_booked, s.cancellation,  u.birthdate, u.gender, u.married,

 u.has_children, u.home_country, u.home_city, u.home_airport, u.home_airport_lat,

  u.home_airport_lon,u.sign_up_date,  f.origin_airport, f.destination, f.destination_airport,

 f.seats, f.return_flight_booked, f.departure_time, f.return_time, f.checked_bags,

  f.trip_airline, f.destination_airport_lat, f.destination_airport_lon,f.base_fare_usd,  h.hotel_name,

 CASE WHEN h.nights<=0 then 1 else h.nights END AS nights,

 h.rooms, h.check_in_time, h.check_out_time, h.hotel_per_room_usd AS
hotel_price_per_room_night_usd from filtered_users fu left join users u

on fu.user_id = u.user_id

left join sessions s

ON u.user_id = s.user_id

left join flights f

on s.trip_id = f.trip_id

left join hotels h
```

```
on s. trip_id = h.trip_id
where s.session_start > '2023-01-04'
AND s.user_id IN (SELECT user_id FROM filtered_users)
),
canceled_trips AS (
SELECT DISTINCT trip_id
FROM session_base
 WHERE cancellation = TRUE
),
not_canceled_trips AS(
SELECT *
FROM session_base
 WHERE trip_id IS NOT NULL AND trip_id NOT IN (Select trip_id FROM canceled_trips)
),
user_base_session AS (
 Select user_id,
  SUM (page_clicks) AS num_clicks,
  COUNT(distinct session_id) as num_sessions,
  ROUND(AVG(session_duration),2) as avg_session_duration
 From session_base
  GROUP BY user_id
),
user_base_trip AS (
 SELECT user_id,
```

```
  COUNT(DISTINCT trip_id) AS num_trips,

  SUM(CASE WHEN flight_booked = TRUE AND return_flight_booked = TRUE THEN 2

     WHEN flight_booked = TRUE THEN 1

     ELSE 0  END) as num_flights2,

  COALESCE(SUM(hotel_price_per_room_night_usd*nights*rooms)) AS hotel_original_price,

  COALESCE((SUM((hotel_price_per_room_night_usd*nights*rooms) *

                (1- (CASE WHEN hotel_discount_amount IS NULL THEN 0 ELSE
hotel_discount_amount END)))),0) AS discounted_hotel,

  COALESCE(SUM(base_fare_usd)) AS flight_original_price,

          COALESCE((SUM((base_fare_usd) *

                (1- (CASE WHEN flight_discount_amount IS NULL THEN 0 ELSE
flight_discount_amount END)))),0) AS discounted_flight,

  COUNT(checked_bags) as checkedIn_bags,

  COUNT(seats) as num_seats,

  SUM(DATE_PART('day', departure_time - session_end)) AS days_until_departure,

  ROUND(SUM(EXTRACT(EPOCH FROM (return_time - departure_time)) / 86400)) AS
trip_length_days,

  COALESCE(SUM(base_fare_usd)) AS flight_without_discount,

  SUM(haversine_distance(home_airport_lat, home_airport_lon, destination_airport_lat,
destination_airport_lon)) AS distance_km,

          SUM(nights) AS nights,

  SUM(rooms) AS rooms

FROM not_canceled_trips

          GROUP BY user_id

  ),

Persona_check AS (
```

```
SELECT b.*,
  EXTRACT(YEAR FROM AGE(u.birthdate)) AS age,
  t.nights,
        t.rooms,
  u.gender,
  u.married,
  u.has_children,
  u.home_country,
  u.home_city,
  u.home_airport,
  u.home_airport_lon,
  u.home_airport_lat,
  u.sign_up_date,
  t.num_trips,
  t.num_flights2,
  t.flight_original_price,
  t.discounted_flight,
  t.hotel_original_price,
  t.discounted_hotel,
  t.checkedIn_bags,
  t.num_seats,
        t.days_until_departure,
  t.trip_length_days,
  t.distance_km
```

```
FROM user_base_session b
LEFT JOIN users u ON b.user_id = u.user_id
LEFT JOIN user_base_trip t ON b.user_id = t.user_id ),
age_group_metrics AS(SELECT
    CASE
        WHEN age BETWEEN 18 AND 25 THEN '18-25'
        WHEN age BETWEEN 26 AND 40 THEN '26-40'
        WHEN age BETWEEN 41 AND 60 THEN '41-60'
        WHEN age >= 60 THEN '60+'
        ELSE 'Other'
    END AS age_group,
    COUNT(*) AS count
FROM
    persona_check pc
GROUP BY
    CASE
        WHEN age >= 18 AND age <= 25 THEN '18-25'
        WHEN age >= 26 AND age <= 40 THEN '26-40'
        WHEN age >= 41 AND age <= 60 THEN '41-60'
        WHEN age >= 60 THEN '60+'
        ELSE 'Other'
    END
ORDER BY age_group
),
```

```
persona_metrics AS (SELECT
    user_id,
    num_clicks,
    num_sessions AS num_sessions,
    avg_session_duration AS avg_session_duration,
    age,
    married,
    has_children,
    COALESCE(ROUND(AVG(nights)),0) AS nights,
    COALESCE(ROUND(AVG(rooms)),0) AS rooms,
    COALESCE(ROUND(AVG(num_seats))) AS num_seats,
    COALESCE(ROUND(AVG(checkedin_bags)),0) AS checkedin_bags,
    COALESCE(ROUND(AVG(trip_length_days)),0) AS trip_length_days,
    SUM(num_trips) AS num_trips,
    COALESCE(ROUND(AVG(num_flights2)),0) AS num_flights2,
    COALESCE(ROUND(AVG(flight_original_price)),0) AS flight_original_price,
    COALESCE(ROUND(AVG(discounted_flight)),0) AS discounted_flight,
    COALESCE(ROUND(AVG(hotel_original_price)),0) AS hotel_original_price,
    COALESCE(ROUND(AVG(discounted_hotel)),0) AS discounted_hotel,
    COALESCE(ROUND(AVG(days_until_departure)),0) AS days_until_departure,
    COALESCE(AVG(distance_km),0) AS distance_km,
      CASE
      WHEN AVG(trip_length_days) <= 5 THEN 'Short Trip'
      WHEN AVG(trip_length_days) BETWEEN 6 AND 10 THEN 'Medium Trip'
```

```
    ELSE 'Long Trip'
  END AS trip_length_category,
  CASE
    WHEN AVG(discounted_hotel) <= 500 THEN 'Low Spender'
    WHEN AVG(discounted_hotel) BETWEEN 501 AND 2000 THEN 'Medium Spender'
    ELSE 'High Spender'
  END AS hotel_spend_category,
  CASE
    WHEN AVG(num_trips) = 1 THEN 'Rare Traveler'
    WHEN AVG(num_trips) BETWEEN 2 AND 5 THEN 'Frequent Traveler'
    ELSE 'Very Frequent Traveler'
  END AS trip_frequency_category,
  CASE
    WHEN married = false AND has_children = false AND AVG(num_seats) =1 and
AVG(checkedin_bags)<=2 THEN 'Solo'
    WHEN married = true AND has_children = false AND AVG(num_seats) =2 and
AVG(checkedin_bags)>=2 THEN 'Couple'
    WHEN married = true AND has_children = true AND AVG(num_seats) >2 and
AVG(checkedin_bags)>1 THEN 'Family'
    WHEN married = false AND has_children = true AND AVG(num_seats) >2 and
AVG(checkedin_bags)>1 THEN 'Family2'
    WHEN AVG(trip_length_days) <= 5 AND AVG(num_seats) <3 and AVG(checkedin_bags)
<2 THEN 'Business'
    WHEN married IS NOT NULL AND AVG(num_seats) >2 and AVG(checkedin_bags) >2
THEN 'Groups'
      ELSE 'Normal Travelers'
      END AS persona_type
```

```
FROM persona_check

GROUP BY user_id, married, has_children, age, num_sessions, avg_session_duration,
num_clicks

ORDER BY hotel_spend_category desc

),

customer_perks AS(SELECT pm.user_id,

                CASE

                        WHEN persona_type = 'Solo' THEN 'Free WiFi and Roaming Connection'

                        WHEN persona_type = 'Business' THEN 'Free lounge access'

                        WHEN persona_type = 'Family' THEN 'No cancellation fees'

                        WHEN persona_type = 'Family2' THEN 'Kids free meal'

                        WHEN persona_type = 'Groups' THEN '10% on Group Booking Discount
on hotels and flights'

                        WHEN persona_type = 'Couple' THEN 'Safari adventure for 2 '

                ELSE '10% discount on shopping'

        END AS perks

from persona_metrics pm)

select *

from persona_metrics pm

left join customer_perks cp

ON pm.user_id = cp.user_id
```