Executive Summary: TravelTide

Problem Statement:

TravelTide is performing well in gathering and delivering user-centric data and easily shows relevant information while users search for them. However, its facing a major setback in customer retention. Hence, the main purpose of this analysis is to aggregate the user data to the appropriate level to help the Marketing team formulate a marketing strategy resulting in more customer retention.

Projects Objective:

The strategy for customer retention which has been decided upon is formulating a Rewards Program based on certain perks and mapping customers affinity towards those perks through customer segmentation. The perks are :

- Free hotel meal
- Exclusive discounts
- Free checked bag in flights
- 1 night free hotel with flights
- No cancellation fees

Methodology:

Since the requirement was more focused on recent users, hence using SQL to select data on the basis of users who have at least logged into the TravelTide portal 8 times and those browsing sessions which are on and beyond 4th Jan, 2023. Based on the selected data, few parameters are calculated at the user level. On the basis of these parameters users are segmented and matched to respective perks to align with the Rewards Program. The parameters which will be used further for explanation are:

- Average page clicks for each user (avg_page_clicks)
- Average Dollar Saved per Kilometre travelled in flight (ads_km)
- Average of Flight Discount Amount (avg_flight_disc)
- Average Hotel Discount Proportion (disc_hotel_prop)
- Average Trip Duration measured as the difference between departure time and return time of the user (avg_trip_dur)

- Average sessions for each user (avg_session)
- Average Flight Discount Proportion (disc_flight_prop)
- Average Dollar Saved per Night in hotel (ads_night)
- Average of Hotel Discount Amount (avg_hotel_disc)
- Average number of bags used while travelling by each user (avg_bags)

Key Findings:

1) While understanding the data in SQL, it is noticed that there are cases when although there is hotel or flight discount availed, it is not converted into a Trip ID. Also there are cases where a hotel or flight is booked but no Trip ID is generated (refer **link**). This can be interpreted as whether a discount is availed or not, it is not converted into a trip, which in turn is a loss to the company.

   https://public.tableau.com/views/CustomerBehaviourasperBookingsDiscounts/Dashboard1?:language=en-US&:display_count=n&:origin=viz_share_link

2) Segmentation using the parameters:
   a) Free Hotel Meal: Parameters used to calculate are - avg_page_clicks, avg_session and ads_night.

      Users spending more time in the website with high number of page clicks along   with showing a tendency to save during hotel booking through different discounts and offers show that they have an affinity towards and are in search of deals whenever available.

   b) Free Checked Bags: Parameters used are: avg_trip_dur and avg_bags.
      It's a general tendency that when travelling for longer duration, users do have more number of bags. Hence they do look for trips where they don't have to pay extra for their luggage's. Hence users with high index in these parameters suits well for free checked bag perk.

   c) No Cancellation Fees: Parameters used are: avg_page_clicks, avg_session, avg_flight_disc and avg_hotel_disc.
      This is another psychological behaviour of people where there is a general affinity towards not paying any extra charges in case of cancelling the booking. This trait is more prevalent in senior citizens or retired people as they are more inclined towards deals that don't charge them in case of any sudden cancellation.

   d) Exclusive Discounts: Parameters used are: ads_km, disc_flight_prop, avg_flight_disc, ads_night, disc_hotel_prop and avg_hotel_disc.
      Users with high browsing session and high page clicks generally point towards the fact that they are searching for something. To add on top of it, if they have high average savings on hotels and flights and also high on availing fight and hotel discounts, definitely says that the user is a bargain hunter ie, to say these users are generally only converted when they are provided with some special offers. Hence a strategy that focuses on providing some special discounts to these users might work.

   e) One Night Free Hotel with Flight: Parameters used are: avg_page_clicks, avg_session, ads_km, ads_night and avg_trip_dur.
      Similar to Exclusive Discounts, these users also show an affinity towards good offers. But since they have high trip duration time, a special discount such as 1 night free would be a lucrative offer for them to reject.

3) Customer Segmentation:
   https://public.tableau.com/views/CustomerSegmentation_16937639128070/Dashboard1?:language=en-US&:display_count=n&:origin=viz_share_link
   As can be seen from the above visual, four of the perks have around same number of users assigned to each perk showing that around 25% of the users ie around 1/4th of the users have affinity towards the perk "1 night free hotel with flight" followed by "no cancellation fees" with around 23% of the users.

Recommendations & Next Steps:

1) Although these perks are lucrative from a user's perspective, but since these are a cost to the company, narrowing down the customer numbers to a smaller sample and then providing the perks in the initial phase would be better to understand the retention rate before fully applying it to all the users.

2) It would be beneficial to analyse the sales and profit data before going ahead with the perks for better forecasting and understanding the extent to which these perks can be bearable by the company.