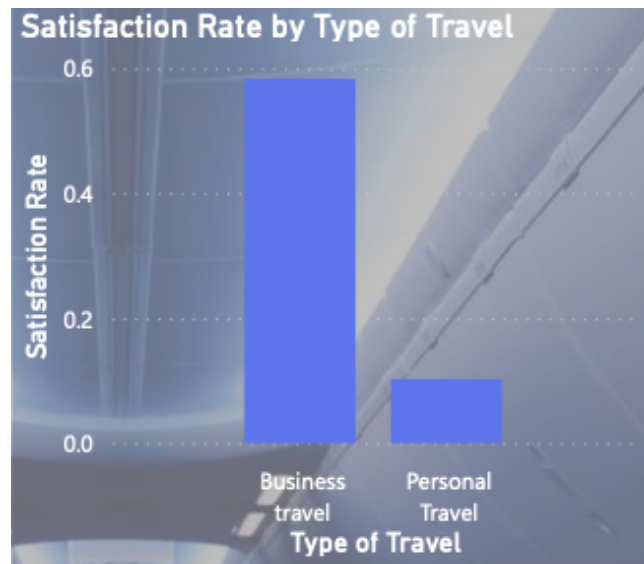
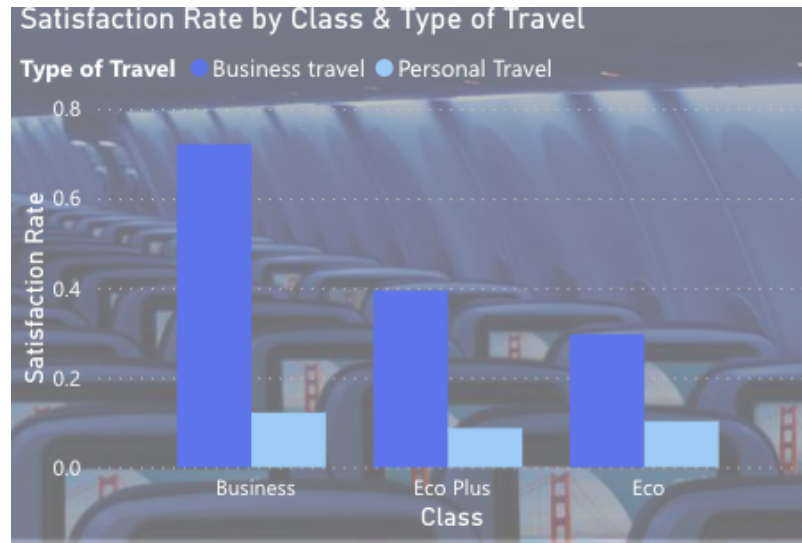


Business Analyst – Analysis of Exploratory Data Analysis



Business Analysis: There is a high correlation between the Type of Travel: Business travel and the class: Business.

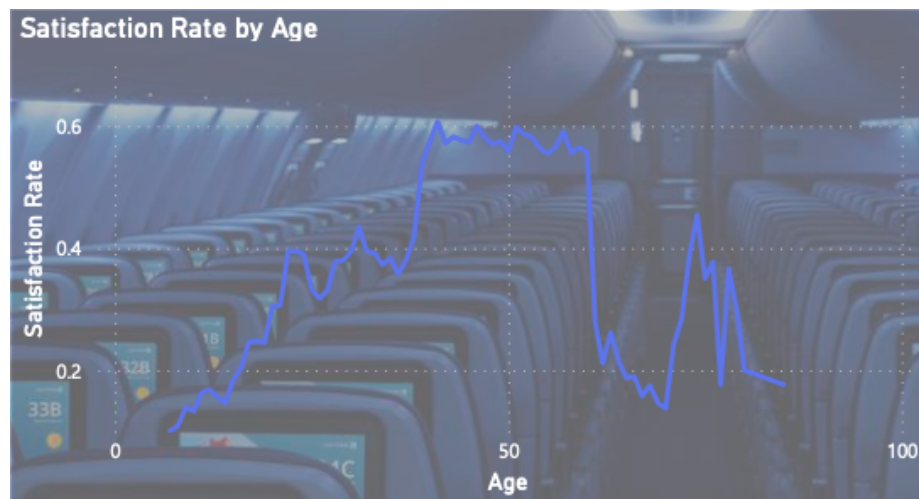
Some business travelers may not necessarily be paying for their airfare, specifically those who are travelling for business reasons. As a result, these individuals will be less demanding regarding the overall service they receive, as they have not personally endured a cost. Individuals who must pay out of their pocket i.e., personal travel will likely be more demanding when it comes to service and therefore more likely to be unsatisfied as a result of delays or inconveniences.



This is further observed by the above graph which shows that a customer's satisfaction marginally increasing when holding personal travel constant but increasing the class.

Additionally, another explanation is that those who travel business for personal travel do so frequently and therefore are not as appreciative of the additional amenities that are offered in business versus economy class. The marginal satisfaction incurred of repeatedly flying business is very low.

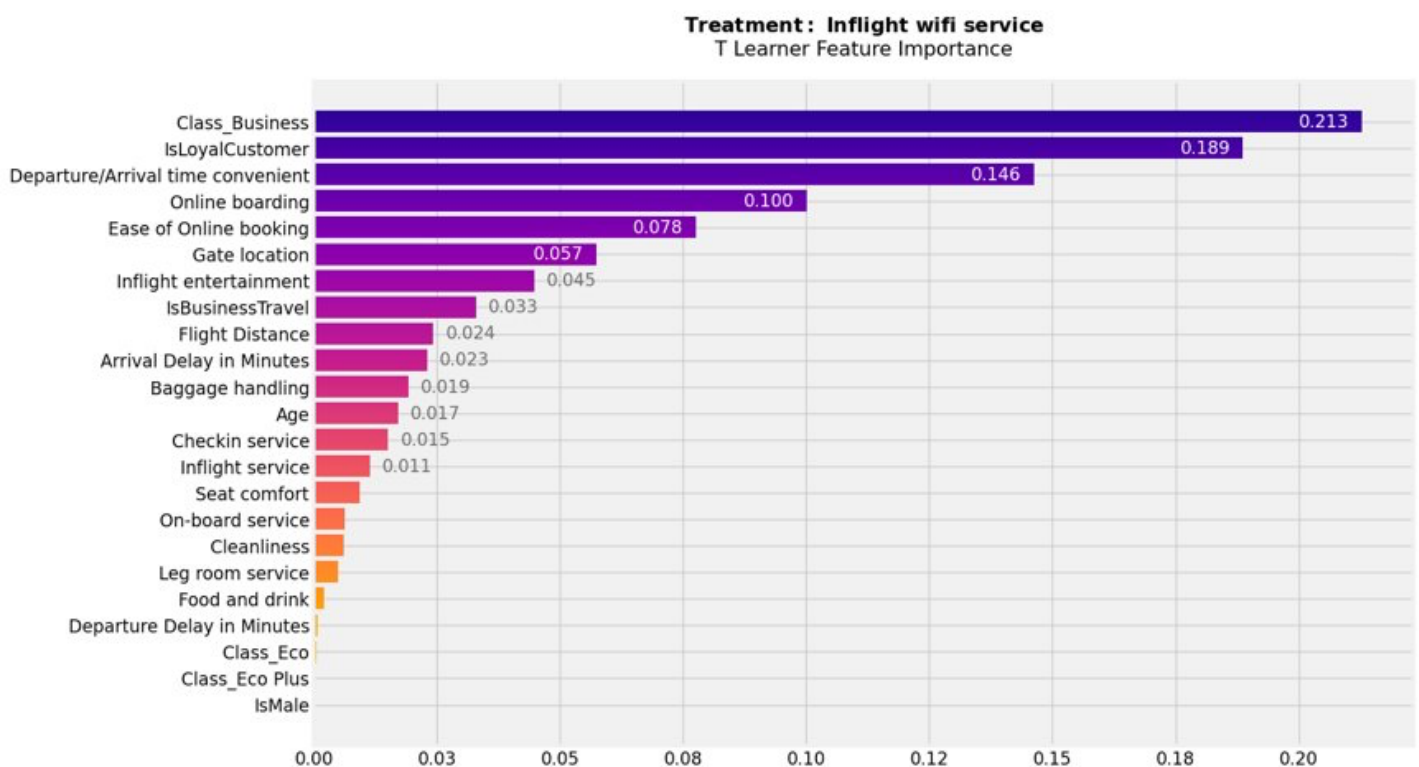
Less likely but possible: People who frequently travel economy class, but opted to travel for business class could have done so, as a result of an emergency or having to care for an ill family member. These extenuating circumstances may have an impact on the Satisfaction score.



Business Analysis: The results of the initial exploratory data analysis show that the Satisfaction Rate of travellers increases with age, plateauing at around 40 years and decreasing at approximately 60 years of age. A likely explanation for this phenomenon is the relationship between age and business travel. As individuals age, they are likely to progress in their career and therefore more likely to fly business.

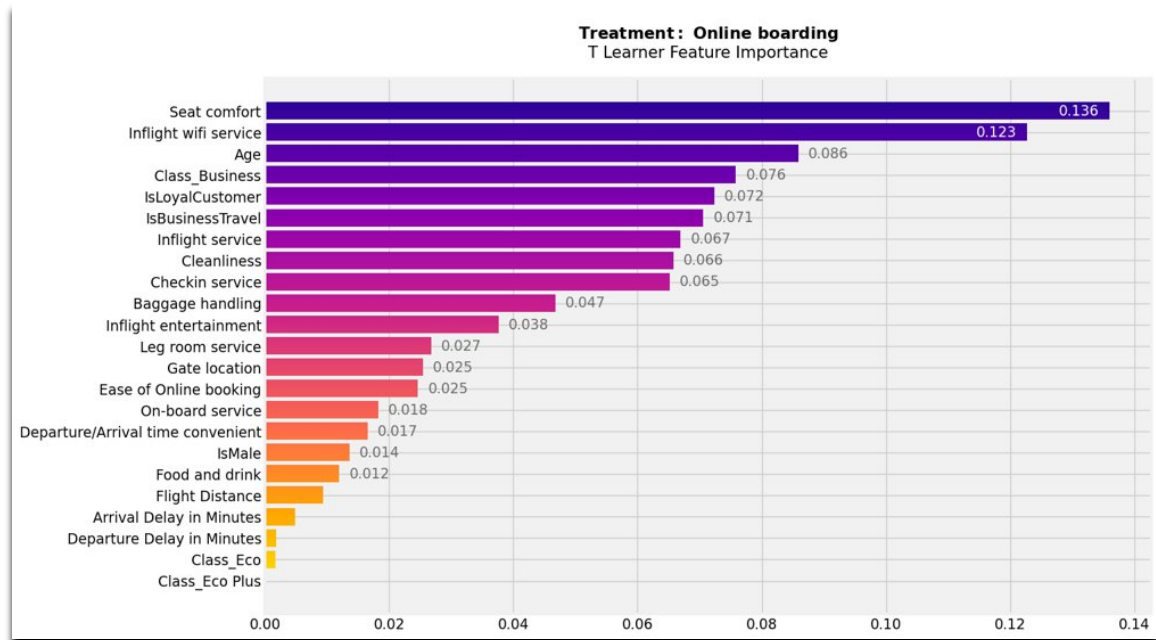
The decrease in satisfaction rate observed at around 60 years of age is likely correlated with retirement. The likelihood that a customer travels for business reasons starts to decline after 55 the closer the customers reach retirement. Some business travel customers may start retiring early. As we have seen from the previous graph, Business class passengers significantly drive up the overall satisfaction rate by class.

Interpretation of Results



Inflight Wifi Service affects customer satisfaction in the following ways:

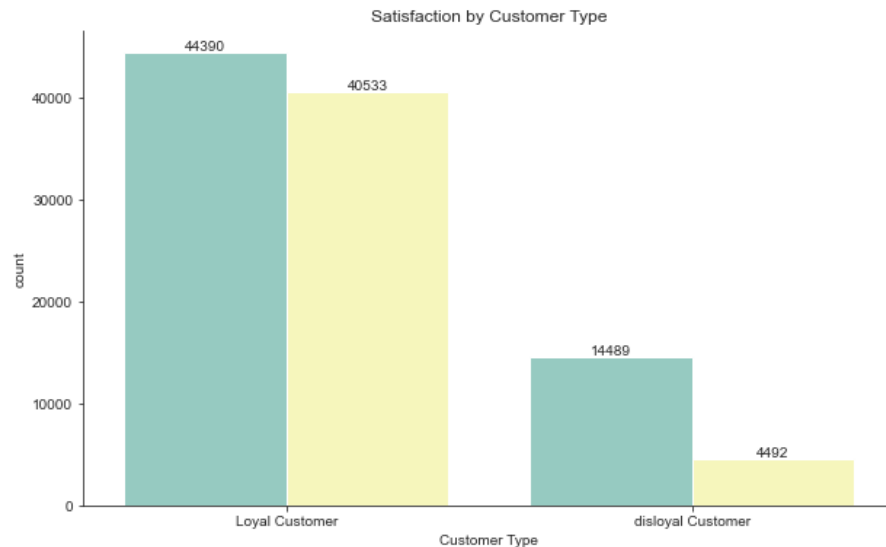
1. **Convenience:** In today's connected world, passengers expect to be able to stay connected to the internet while on board a flight. It enables them to stay connected with their work, family and friends, and entertainment during the flight, which enhances their overall travel experience.
 2. **Productivity:** WiFi service on planes allows business travelers to work while in the air, making their time on the plane more productive. This is especially important for frequent business travelers who often need to work while traveling.
 3. **Entertainment:** It allows passengers with access to a range of entertainment options.
 4. **Competitive advantage:** Offering WiFi service on planes can be a differentiating factor for airlines in a highly competitive market, as passengers are more likely to choose an airline that offers this service over one that doesn't.
 5. **Customer satisfaction:** Providing WiFi service on planes can contribute to higher customer satisfaction and loyalty, as passengers are more likely to have a positive experience if they are able to stay connected during the flight.
-
- The score of 0.213 for Business Class indicates that passengers traveling in Business Class may be more likely to have a positive experience with inflight wifi service and may be more likely to use it again in the future. This could be due to factors such as higher expectations for amenities and services among Business Class passengers or a greater need to stay connected while traveling for business.
 - The score of 0.189 for Loyal Customer shows that passengers who have a history of being loyal to the airline may have a positive experience with inflight wifi service and may be more likely to use it again in the future. A higher level of comfort and familiarity with the airline and its services or a greater likelihood to use additional services offered by the airline.



1. **Convenience:** Online boarding enables passengers to check-in, select their seats, and receive their boarding passes electronically, typically through a website or mobile app provided by the airline. This eliminates the need for passengers to stand in long lines at the airport and can save time, especially during peak travel periods.
2. **Flexibility:** Online boarding provides passengers with greater flexibility to manage their travel plans, as they can check-in and select their seats from anywhere with an internet connection, at any time before the flight departure. This can be especially useful for passengers who have last-minute travel changes or who need to check-in outside of normal airport hours.
3. **Reduced Stress:** Online boarding can help reduce the stress and anxiety associated with air travel, as passengers can complete the check-in process from the comfort of their own homes or while on the go, and then simply proceed to security and boarding upon arrival at the airport.
4. **Contactless:** Online boarding can be a contactless process, which reduces the risk of exposure to infectious diseases, especially during pandemics. Passengers can use their mobile devices to scan their boarding passes at the gate, eliminating the need for physical contact with airport personnel.

Limitation of Using Dataset for Customer Acquisition

- Disloyal customers have a significantly lower response rate than loyal customers in the survey. This could potentially bias the business analysis that could be generated from the survey. This is because the survey results would not be representative of the entire customer population, but instead would be skewed towards the opinions and experiences of the more loyal customers who were more likely to respond to the survey.
- Using this dataset to make business conclusions, could result in an overestimation of the potential success of the satisfaction of customers, leading the business to make decisions based on incomplete or inaccurate information.



- Additionally, regarding causal inference. Feature importance scores can vary depending on the specific dataset and modeling approach used. Feature importance results should be interpreted with caution and considered in conjunction with other factors when making decisions about the importance of specific features for a given treatment.

Recommendations

- To minimize the impact of low response rates among disloyal customers, businesses could consider using targeted outreach strategies to encourage these customers to participate in the survey. This might include offering incentives for completing the survey or using targeted marketing campaigns to reach out to disloyal customers directly.
- Bridge the gap between satisfaction scores of business travelers and personal travelers. Possible solutions include offering more flexibility to personal travelers. Offering more flexible travel options, such as open-ended tickets or travel vouchers that can be used at a later date, can provide greater convenience and peace of mind to personal travelers.