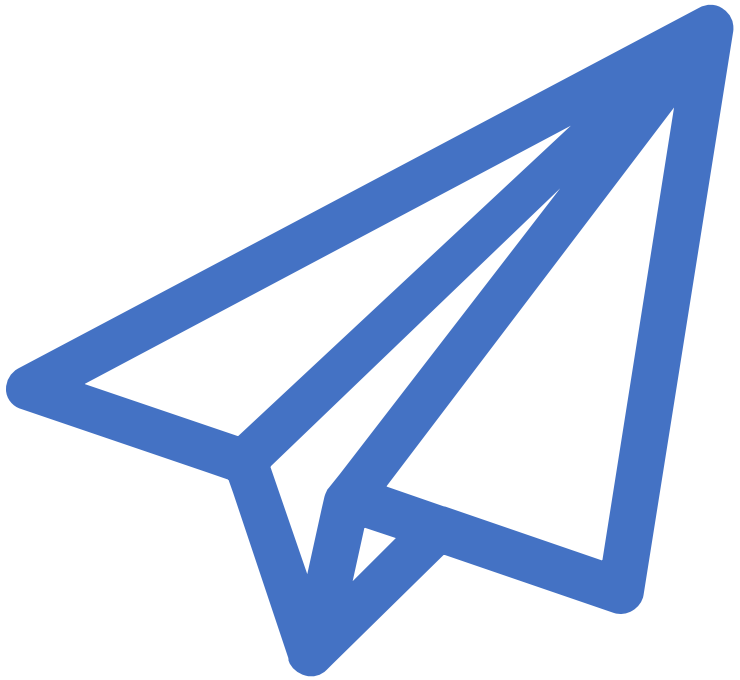
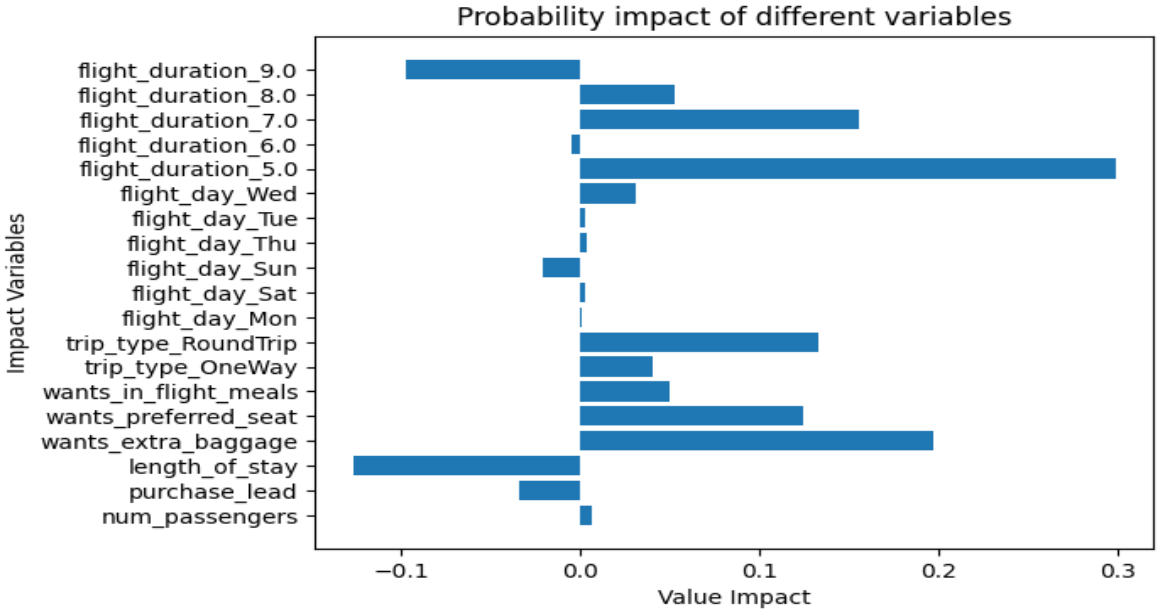


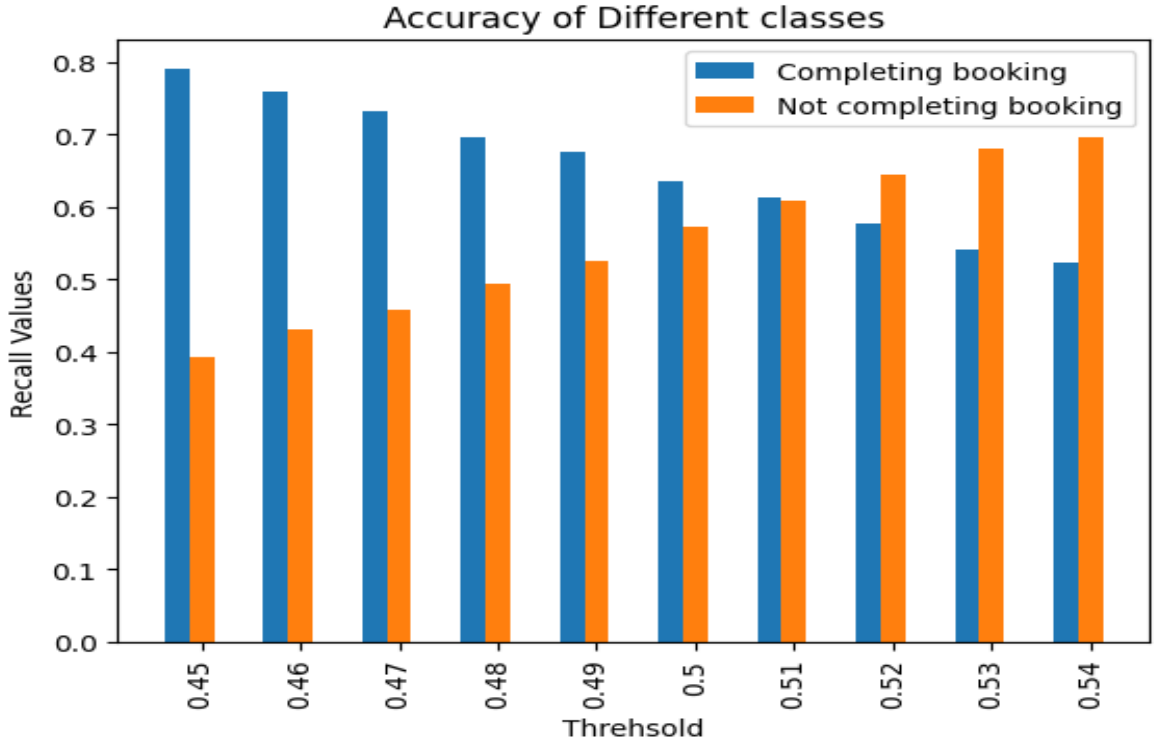
Flight of Insights

Decoding Booking Variables and Model Mastery

British Airways Virtual Internship Experience

- Thejas Kiran





Variables Impact:

- People prefer flying on **weekdays** during holiday seasons due to **low ticket prices**.
- There is a higher chance of booking a trip that is **round-trip**.
- Customers want **more baggage** during holidays than inflight meals and preferred seats.
- The **length of stay** and the **purchase lead** has a **negative impact** of them buying a ticket (human uncertainties increase over time).
- People book shorter flights more easily than longer ones.

Note: How to read the impact graph? Each bar value explains the probability impact of the user buying the ticket according to the variable value. Positive impact is good!

Model Evaluation:

- We need to focus on getting more bookings than overall accuracy as we do not want to lose these customers.
- Hence, we chose recall as the accuracy metric.
- The best decision on threshold would be made on the cost impact if we predict a wrong customer as booking ticket.
- According to our logistic classification model, the optimized threshold is **0.51**, which indicates that we are correctly predicting that the customer buys a ticket **61%** of the time and that the customer doesn't buy a ticket **60%** of the time. This can be a good benchmark model for future enhancements.