

FOR PURPOSES OF FORAGE VIRTUAL WORK EXPERIENCE PROGRAM



BRITISH AIRWAYS

PREDICTIVE MODEL AND ITS RESULTS

- Swamesh Lotlikar

PREDICTIVE MODELLING RESULTS

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Recall Rate
75.27 %

Correctly identified 75% of completed bookings.

Precision
30.41 %

when the model predicts a booking will be completed, it is correct about 30.41% of the time..

Accuracy
70.85 %

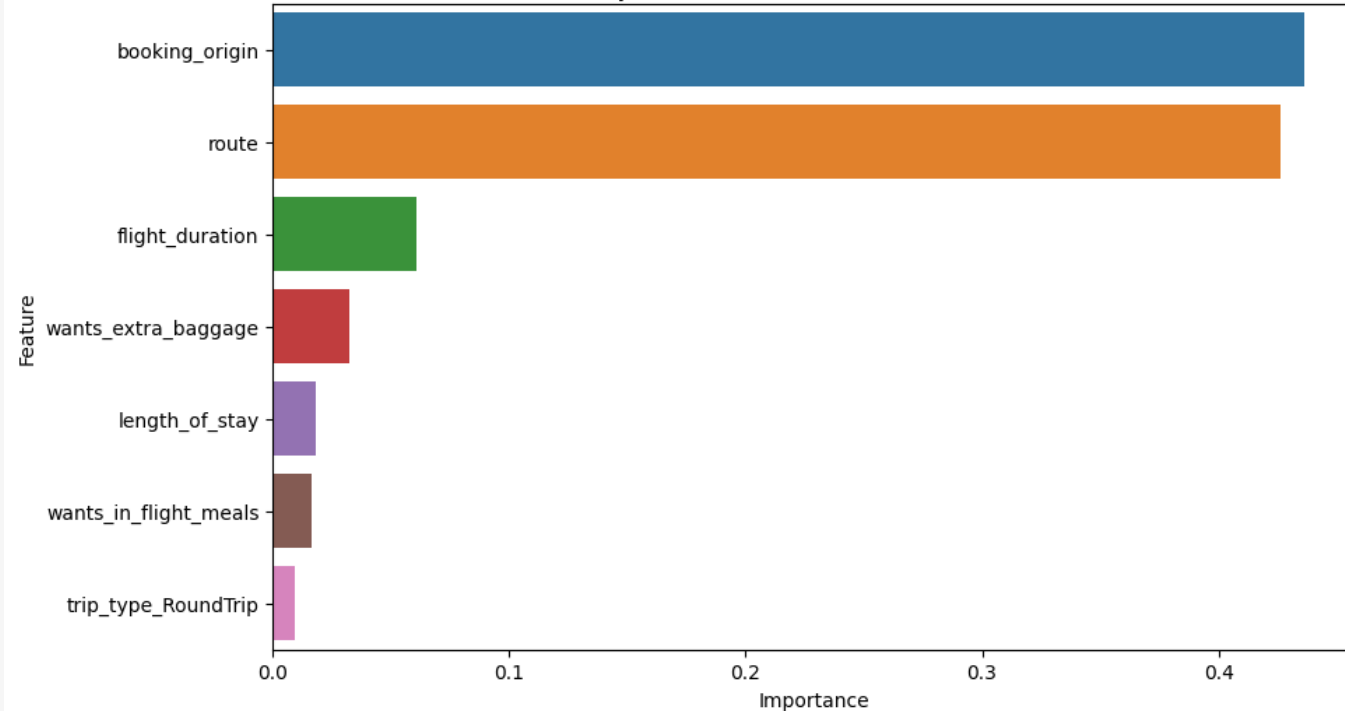
Correctly predicted 71% of all bookings.

F1 Score
43.32 %

This is the harmonic mean of precision and recall. Room for improvement.

- High recall and low precision suggests that model is good at predicting actual positives but not so good when predicting positives. This could lead to **high number of False Positives** meaning incorrectly identifies many negative examples as positive.
- In our case, both are important, thus we need to improve F1 score.
- One of the reasons could be imbalanced dataset as SMOTE was used for handling it.

Feature importances obtained Extra Trees



Top features that can drive successful flight bookings.

- Model was trained on multiple models, hyper parameter tuned using RandomSearch CV for 5 folds of cross validation. Extratrees Regressor performed better than the rest.
- Target Encoded route and booking origin as it may have impact on booking decision.