Flight Price Project Report

Anyone who has booked a flight ticket knows how unexpectedly the prices vary. The cheapest available ticket on a given flight gets more and less expensive over time. This usually happens as an attempt to maximize revenue based on -

1. Time of purchase patterns (making sure last-minute purchases are expensive)
2. Keeping the flight as full as they want it (raising prices on a flight which is filling up in order to reduce sales and hold back inventory for those expensive last-minute expensive purchases)

So, we have to work on a project where you collect data of flight fares with other features and work to make a model to predict fares of flights.

Steps taken:

1. We check the data inside the dataset to understand the type of data.
2. We see that there are no null values present in the dataset.
3. There are a lot of data cleaning to be done, hence we do that.
4. We see few features that are either unique to each column such as 'Unnamed: 0' or features that are same for all the rows of the data that add no value to the learning.
5. Such data is removed so as to reduce the features for the dataset.
6. Now we do a general data analysis to predict the change in price with various features.
7. Now we do an extensive research using a correlation matrix to grade each column to the weightage to the target column.
8. We remove the features that has very little correlation.
9. Now we have reduced our dataset to the features that produces a weightage to the target column and hence ready to train the model.
10. On the basis, we better understand what value each flight features produce in the price predictions.

Conclusion:

From the data we can see that flight price vary with the date of booking, Flight departure time, number of stops and flight duration. Hence, these features help us understand how the changes in flight price is stimulated and use this to our benefit to conclude as to when and what features allow us to get the flight for cheap.