

The first thing I did was to load the datasets and process them. I merged the airport_country_code_mapping.csv to include the country information. I extracted departure day, month, and year from the Departure Date column. I categorized age groups into 'Child', 'Adult', and 'Senior.' I used one-hot encoding on categorical variables such as gender, age group, and airport country code to make them numerical. After doing the above steps, I had a dataset that was clean with Ticket Price, Departure Month, Day, Year, Gender (encoded), Age Group (encoded), and Airport Country Code (encoded).

Secondly, I used a decision tree classifier that I trained using X_train (features) and y_train (Eligible_For_Discount). The tree recursively splits the data based on feature values to best separate passengers who got a discount (Yes) from those who didn't (No).

The hyperparameter tuning (using GridSearchCV) finds the best tree depth and minimum samples for splitting to improve accuracy.

The trained decision tree identified the four key patterns:

1. Departure Month: By analyzing the tree, I found out that passengers who are traveling in January and mid-February (month ≤ 1.5) were more likely to receive a discount.
2. Gender and Age Group: The tree showed that if the passenger is not a male and not an adult, they have a higher chance of receiving a discount.
3. Price: The decision tree results showed that passengers were more likely to receive a discount if the ticket price is low (less than or equal to \$252.50)
4. Airport Country Code: The following 10 countries had the highest rate of flight discounts. These countries have a couple of things in common. The first one is that many are small islands/territories with relatively small populations. Another thing is that these locations are frequent travel destinations and tourist-heavy, leading to more flights going to these destinations and hence, more discounts. One last thing these countries have in common is their historical ties to the British Empire. Some of these are British Overseas Territories while others are former British colonies.
 - a. 154 Norfolk Island 1.000000
 - b. 76 Gambia 0.888889
 - c. 7 Antigua and Barbuda 0.833333
 - d. 87 Guernsey 0.800000
 - e. 101 Isle of Man 0.800000

- f. 80 Gibraltar 0.750000
- g. 29 British Indian Ocean Territory 0.727273
- h. 58 Dominica 0.714286 1
- i. 7 Barbados 0.714286
- j. 129 Malta 0.714286

You need to run the code on the newly downloaded `predictions_challenge_test`. Once you run it once, you have to delete the file and then rerun or it will throw you an error.

Output from running the code:

Confusion Matrix:

```
[[4011 935]
 [1446 3901]]
```

Classification Report:

```
precision recall f1-score support

0    0.74    0.81    0.77    4946
1    0.81    0.73    0.77    5347

accuracy          0.77    10293
macro avg    0.77    0.77    0.77    10293
weighted avg    0.77    0.77    0.77    10293
```

Decision Tree Rules:

```
|--- Departure Month <= 1.50
| |--- class: 1
|--- Departure Month > 1.50
| |--- Departure Month <= 11.50
| | |--- Gender_Male <= 0.50
| | | |--- Age Group_Adult <= 0.50
| | | | |--- Age Group_Senior <= 0.50
| | | | |--- Ticket Price <= 252.50
```

```
| | | | | | | | | | --- Airport Country Code_MG <= 0.50  
| | | | | | | | | | --- Airport Country Code_LK <= 0.50  
| | | | | | | | | | --- Airport Country Code_RU <= 0.50  
| | | | | | | | | | --- class: 1  
| | | | | | | | | | --- Airport Country Code_RU > 0.50  
| | | | | | | | | | --- class: 1  
| | | | | | | | | | --- Airport Country Code_LK > 0.50  
| | | | | | | | | | --- class: 0  
| | | | | | | | | | --- Airport Country Code_MG > 0.50  
| | | | | | | | | | --- class: 0  
| | | | | | | | | | --- Ticket Price > 252.50  
| | | | | | | | | | --- Airport Country Code_PH <= 0.50  
| | | | | | | | | | --- Airport Country Code_ZM <= 0.50  
| | | | | | | | | | --- Ticket Price <= 318.50  
| | | | | | | | | | --- Ticket Price <= 312.50  
| | | | | | | | | | --- class: 1  
| | | | | | | | | | --- Ticket Price > 312.50  
| | | | | | | | | | --- class: 0  
| | | | | | | | | | --- Ticket Price > 318.50  
| | | | | | | | | | --- Airport Country Code_TZ <= 0.50  
| | | | | | | | | | --- class: 1  
| | | | | | | | | | --- Airport Country Code_TZ > 0.50  
| | | | | | | | | | --- class: 0  
| | | | | | | | | | --- Airport Country Code_ZM > 0.50  
| | | | | | | | | | --- Departure Day <= 20.00  
| | | | | | | | | | --- class: 0  
| | | | | | | | | | --- Departure Day > 20.00  
| | | | | | | | | | --- class: 0  
| | | | | | | | | | --- Airport Country Code_PH > 0.50  
| | | | | | | | | | --- Departure Month <= 3.50  
| | | | | | | | | | --- class: 1  
| | | | | | | | | | --- Departure Month > 3.50  
| | | | | | | | | | --- class: 1
```

| | | | |--- Age Group_Senior > 0.50
| | | | |--- Ticket Price <= 205.00
| | | | | |--- Ticket Price <= 182.50
| | | | | |--- Departure Month <= 7.50
| | | | | | |--- Ticket Price <= 111.00
| | | | | | |--- class: 1
| | | | | | |--- Ticket Price > 111.00
| | | | | | |--- Airport Country Code_AU <= 0.50
| | | | | | |--- class: 0
| | | | | | |--- Airport Country Code_AU > 0.50
| | | | | | |--- class: 1
| | | | | | |--- Departure Month > 7.50
| | | | | | |--- Ticket Price <= 107.50
| | | | | | |--- class: 0
| | | | | | |--- Ticket Price > 107.50
| | | | | | |--- Departure Day <= 25.50
| | | | | | |--- class: 1
| | | | | | |--- Departure Day > 25.50
| | | | | | |--- class: 0
| | | | | |--- Ticket Price > 182.50
| | | | | |--- class: 1
| | | | |--- Ticket Price > 205.00
| | | | |--- Airport Country Code_CN <= 0.50
| | | | | |--- Ticket Price <= 1326.50
| | | | | |--- Ticket Price <= 772.50
| | | | | | |--- Ticket Price <= 771.50
| | | | | | |--- class: 1
| | | | | | |--- Ticket Price > 771.50
| | | | | | |--- class: 1
| | | | | | |--- Ticket Price > 772.50
| | | | | | |--- Airport Country Code_TR <= 0.50
| | | | | | |--- class: 1
| | | | | | |--- Airport Country Code_TR > 0.50

| | | | | | | | | |--- class: 0
| | | | | | | |--- Ticket Price > 1326.50
| | | | | | | |--- Ticket Price <= 1576.00
| | | | | | | |--- Ticket Price <= 1479.50
| | | | | | | | |--- class: 1
| | | | | | | |--- Ticket Price > 1479.50
| | | | | | | | |--- class: 1
| | | | | | | |--- Ticket Price > 1576.00
| | | | | | | |--- Airport Country Code_VN <= 0.50
| | | | | | | | |--- class: 1
| | | | | | | |--- Airport Country Code_VN > 0.50
| | | | | | | | |--- class: 0
| | | | | |--- Airport Country Code_CN > 0.50
| | | | | | |--- Ticket Price <= 258.00
| | | | | | | |--- class: 0
| | | | | | |--- Ticket Price > 258.00
| | | | | | | |--- Departure Day <= 5.50
| | | | | | | |--- Ticket Price <= 415.00
| | | | | | | | |--- class: 0
| | | | | | | |--- Ticket Price > 415.00
| | | | | | | | |--- class: 1
| | | | | | | |--- Departure Day > 5.50
| | | | | | | |--- Departure Month <= 9.50
| | | | | | | | |--- class: 1
| | | | | | | |--- Departure Month > 9.50
| | | | | | | | |--- class: 1
| | | |--- Age Group_Adult > 0.50
| | | |--- Ticket Price <= 201.50
| | | |--- Ticket Price <= 198.50
| | | | |--- Departure Month <= 3.50
| | | | | |--- Airport Country Code_BR <= 0.50
| | | | | | |--- class: 0
| | | | | | |--- Airport Country Code_BR > 0.50

| | | | | | | | | |--- class: 0
| | | | | | | |--- Departure Month > 3.50
| | | | | | | |--- Ticket Price <= 109.00
| | | | | | | |--- class: 1
| | | | | | | |--- Ticket Price > 109.00
| | | | | | | |--- Ticket Price <= 133.50
| | | | | | | |--- class: 0
| | | | | | | |--- Ticket Price > 133.50
| | | | | | | |--- Ticket Price <= 153.00
| | | | | | | |--- class: 1
| | | | | | | |--- Ticket Price > 153.00
| | | | | | | |--- class: 0
| | | | | |--- Ticket Price > 198.50
| | | | | |--- class: 1
| | | | |--- Ticket Price > 201.50
| | | | |--- Airport Country Code_CN <= 0.50
| | | | | |--- Ticket Price <= 1207.50
| | | | | | |--- Airport Country Code_PH <= 0.50
| | | | | | |--- Ticket Price <= 1204.50
| | | | | | | |--- Airport Country Code_JP <= 0.50
| | | | | | | |--- class: 0
| | | | | | | |--- Airport Country Code_JP > 0.50
| | | | | | | |--- class: 1
| | | | | | | |--- Ticket Price > 1204.50
| | | | | | | |--- Airport Country Code_US <= 0.50
| | | | | | | |--- class: 0
| | | | | | | |--- Airport Country Code_US > 0.50
| | | | | | | |--- class: 0
| | | | | | |--- Airport Country Code_PH > 0.50
| | | | | | | |--- Ticket Price <= 757.00
| | | | | | | |--- Ticket Price <= 439.00
| | | | | | | |--- class: 1
| | | | | | | |--- Ticket Price > 439.00

| | | | | | | | | |--- class: 0
| | | | | | | | |--- Ticket Price > 757.00
| | | | | | | | |--- Departure Month <= 2.50
| | | | | | | | |--- class: 0
| | | | | | | | |--- Departure Month > 2.50
| | | | | | | | |--- class: 1
| | | | | | |--- Ticket Price > 1207.50
| | | | | | |--- Ticket Price <= 1584.50
| | | | | | | |--- Ticket Price <= 1499.50
| | | | | | | | |--- Ticket Price <= 1208.50
| | | | | | | | |--- class: 1
| | | | | | | | |--- Ticket Price > 1208.50
| | | | | | | | |--- class: 0
| | | | | | | |--- Ticket Price > 1499.50
| | | | | | | | |--- Ticket Price <= 1500.50
| | | | | | | | |--- class: 1
| | | | | | | | |--- Ticket Price > 1500.50
| | | | | | | | |--- class: 0
| | | | | | | |--- Ticket Price > 1584.50
| | | | | | | |--- Ticket Price <= 2563.50
| | | | | | | | |--- Departure Day <= 4.50
| | | | | | | | |--- class: 0
| | | | | | | | |--- Departure Day > 4.50
| | | | | | | | |--- class: 0
| | | | | | | |--- Ticket Price > 2563.50
| | | | | | | | |--- Departure Day <= 29.50
| | | | | | | | |--- class: 0
| | | | | | | | |--- Departure Day > 29.50
| | | | | | | | |--- class: 1
| | | | | |--- Airport Country Code_CN > 0.50
| | | | | |--- Departure Day <= 6.50
| | | | | | |--- Ticket Price <= 2407.00
| | | | | | |--- Ticket Price <= 537.50

| | | | | | | | | |--- class: 0
| | | | | | | | |--- Ticket Price > 537.50
| | | | | | | | |--- Departure Day <= 1.50
| | | | | | | | |--- class: 0
| | | | | | | | |--- Departure Day > 1.50
| | | | | | | | |--- class: 1
| | | | | | | |--- Ticket Price > 2407.00
| | | | | | | |--- class: 0
| | | | | | |--- Departure Day > 6.50
| | | | | | |--- Ticket Price <= 420.00
| | | | | | |--- class: 1
| | | | | | |--- Ticket Price > 420.00
| | | | | | |--- Ticket Price <= 614.00
| | | | | | | |--- Departure Day <= 11.50
| | | | | | | | |--- class: 0
| | | | | | | | |--- Departure Day > 11.50
| | | | | | | | |--- class: 1
| | | | | | | |--- Ticket Price > 614.00
| | | | | | | |--- Departure Day <= 11.50
| | | | | | | | |--- class: 1
| | | | | | | | |--- Departure Day > 11.50
| | | | | | | | |--- class: 1
| | |--- Gender_Male > 0.50
| | |--- Age Group_Adult <= 0.50
| | | |--- Age Group_Senior <= 0.50
| | | | |--- Airport Country Code_US <= 0.50
| | | | | |--- Airport Country Code_RU <= 0.50
| | | | | | |--- Airport Country Code_GL <= 0.50
| | | | | | |--- Ticket Price <= 288.50
| | | | | | |--- Ticket Price <= 225.50
| | | | | | | |--- class: 1
| | | | | | | |--- Ticket Price > 225.50
| | | | | | | | |--- class: 1

| | | | | | | | | |--- Ticket Price > 288.50
| | | | | | | | | |--- Airport Country Code_GT <= 0.50
| | | | | | | | | |--- class: 0
| | | | | | | | | |--- Airport Country Code_GT > 0.50
| | | | | | | | | |--- class: 1
| | | | | | | |--- Airport Country Code_GL > 0.50
| | | | | | | |--- Departure Month <= 2.50
| | | | | | | | | |--- class: 1
| | | | | | | |--- Departure Month > 2.50
| | | | | | | | | |--- class: 0
| | | | | | |--- Airport Country Code_RU > 0.50
| | | | | | | |--- Ticket Price <= 665.00
| | | | | | | |--- Departure Day <= 23.00
| | | | | | | | | |--- Departure Day <= 10.50
| | | | | | | | | |--- class: 1
| | | | | | | | | |--- Departure Day > 10.50
| | | | | | | | | |--- class: 1
| | | | | | | |--- Departure Day > 23.00
| | | | | | | | | |--- class: 0
| | | | | | | |--- Ticket Price > 665.00
| | | | | | | |--- Departure Day <= 29.00
| | | | | | | | | |--- Ticket Price <= 1058.50
| | | | | | | | | |--- class: 0
| | | | | | | | | |--- Ticket Price > 1058.50
| | | | | | | | | |--- class: 0
| | | | | | | |--- Departure Day > 29.00
| | | | | | | | | |--- class: 1
| | | | | |--- Airport Country Code_US > 0.50
| | | | | |--- Departure Month <= 2.50
| | | | | | |--- Departure Day <= 9.50
| | | | | | | |--- Departure Day <= 8.00
| | | | | | | |--- Ticket Price <= 513.00
| | | | | | | | | |--- class: 1

```
| | | | | | | | | --- Ticket Price > 513.00  
| | | | | | | | | --- class: 1  
| | | | | | | | | --- Departure Day > 8.00  
| | | | | | | | | --- class: 0  
| | | | | | | | | --- Departure Day > 9.50  
| | | | | | | | | --- Ticket Price <= 231.00  
| | | | | | | | | --- class: 0  
| | | | | | | | | --- Ticket Price > 231.00  
| | | | | | | | | --- Departure Day <= 25.50  
| | | | | | | | | --- class: 1  
| | | | | | | | | --- Departure Day > 25.50  
| | | | | | | | | --- class: 1  
| | | | | | | | | --- Departure Month > 2.50  
| | | | | | | | | --- Departure Day <= 25.50  
| | | | | | | | | --- Ticket Price <= 3245.50  
| | | | | | | | | --- Ticket Price <= 2905.50  
| | | | | | | | | --- class: 1  
| | | | | | | | | --- Ticket Price > 2905.50  
| | | | | | | | | --- class: 0  
| | | | | | | | | --- Ticket Price > 3245.50  
| | | | | | | | | --- Departure Month <= 5.50  
| | | | | | | | | --- class: 1  
| | | | | | | | | --- Departure Month > 5.50  
| | | | | | | | | --- class: 1  
| | | | | | | | | --- Departure Day > 25.50  
| | | | | | | | | --- Ticket Price <= 274.00  
| | | | | | | | | --- class: 0  
| | | | | | | | | --- Ticket Price > 274.00  
| | | | | | | | | --- Ticket Price <= 1014.00  
| | | | | | | | | --- class: 1  
| | | | | | | | | --- Ticket Price > 1014.00  
| | | | | | | | | --- class: 1  
| | | | |--- Age Group_Senior > 0.50
```

| | | | | |--- Airport Country Code_CN <= 0.50
| | | | | | |--- Airport Country Code_ID <= 0.50
| | | | | | |--- Airport Country Code_UG <= 0.50
| | | | | | |--- Airport Country Code_US <= 0.50
| | | | | | |--- Airport Country Code_IT <= 0.50
| | | | | | |--- class: 0
| | | | | | |--- Airport Country Code_IT > 0.50
| | | | | | |--- class: 0
| | | | | | |--- Airport Country Code_US > 0.50
| | | | | | |--- Ticket Price <= 3697.00
| | | | | | |--- class: 0
| | | | | | |--- Ticket Price > 3697.00
| | | | | | |--- class: 0
| | | | | | |--- Airport Country Code_UG > 0.50
| | | | | | |--- Departure Day <= 4.00
| | | | | | |--- class: 0
| | | | | | |--- Departure Day > 4.00
| | | | | | |--- class: 1
| | | | | | |--- Airport Country Code_ID > 0.50
| | | | | | |--- Ticket Price <= 2744.50
| | | | | | |--- Ticket Price <= 556.50
| | | | | | |--- Departure Month <= 2.50
| | | | | | |--- class: 0
| | | | | | |--- Departure Month > 2.50
| | | | | | |--- class: 1
| | | | | | |--- Ticket Price > 556.50
| | | | | | |--- Departure Day <= 1.50
| | | | | | |--- class: 0
| | | | | | |--- Departure Day > 1.50
| | | | | | |--- class: 0
| | | | | | |--- Ticket Price > 2744.50
| | | | | | |--- Ticket Price <= 4500.00
| | | | | | |--- class: 1

| | | | | | | | | |--- Ticket Price > 4500.00
| | | | | | | | | |--- Ticket Price <= 4623.50
| | | | | | | | | |--- class: 0
| | | | | | | | | |--- Ticket Price > 4623.50
| | | | | | | | | |--- class: 1
| | | | | |--- Airport Country Code_CN > 0.50
| | | | | | |--- Departure Month <= 5.50
| | | | | | |--- Ticket Price <= 1354.50
| | | | | | |--- Ticket Price <= 1283.00
| | | | | | | |--- Departure Day <= 10.50
| | | | | | | | |--- class: 0
| | | | | | | | |--- Departure Day > 10.50
| | | | | | | | |--- class: 0
| | | | | | | |--- Ticket Price > 1283.00
| | | | | | | | |--- class: 1
| | | | | | |--- Ticket Price > 1354.50
| | | | | | |--- Departure Month <= 2.50
| | | | | | | |--- class: 0
| | | | | | | |--- Departure Month > 2.50
| | | | | | | |--- class: 0
| | | | | | |--- Departure Month > 5.50
| | | | | | |--- Ticket Price <= 1066.50
| | | | | | |--- Ticket Price <= 927.50
| | | | | | | |--- Departure Day <= 23.50
| | | | | | | | |--- class: 1
| | | | | | | | |--- Departure Day > 23.50
| | | | | | | | |--- class: 0
| | | | | | | |--- Ticket Price > 927.50
| | | | | | | |--- Departure Day <= 29.50
| | | | | | | | |--- class: 1
| | | | | | | | |--- Departure Day > 29.50
| | | | | | | | |--- class: 0
| | | | | | | |--- Ticket Price > 1066.50

| | | | | | | | | |--- Ticket Price <= 2187.50
| | | | | | | | | |--- Ticket Price <= 1221.00
| | | | | | | | | |--- class: 0
| | | | | | | | | |--- Ticket Price > 1221.00
| | | | | | | | | |--- class: 0
| | | | | | | | | |--- Ticket Price > 2187.50
| | | | | | | | | |--- Ticket Price <= 2814.00
| | | | | | | | | |--- class: 1
| | | | | | | | | |--- Ticket Price > 2814.00
| | | | | | | | | |--- class: 0
| | | |--- Age Group_Adult > 0.50
| | | |--- Airport Country Code_CN <= 0.50
| | | |--- Airport Country Code_ID <= 0.50
| | | | | |--- Airport Country Code_BR <= 0.50
| | | | | | |--- Airport Country Code_US <= 0.50
| | | | | | | |--- Airport Country Code_PH <= 0.50
| | | | | | | | |--- Airport Country Code_SE <= 0.50
| | | | | | | | | |--- class: 0
| | | | | | | | | |--- Airport Country Code_SE > 0.50
| | | | | | | | | |--- class: 0
| | | | | | | | | |--- Airport Country Code_PH > 0.50
| | | | | | | | | |--- Departure Month <= 7.50
| | | | | | | | | |--- class: 0
| | | | | | | | | |--- Departure Month > 7.50
| | | | | | | | | |--- class: 0
| | | | | | | |--- Airport Country Code_US > 0.50
| | | | | | | |--- Departure Day <= 6.50
| | | | | | | | |--- Ticket Price <= 472.50
| | | | | | | | | |--- class: 0
| | | | | | | | | |--- Ticket Price > 472.50
| | | | | | | | | |--- class: 0
| | | | | | | |--- Departure Day > 6.50
| | | | | | | | |--- Departure Month <= 4.50

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| | | | | | | | | |--- class: 0  
| | | | | | | | |--- Departure Month > 4.50  
| | | | | | | | |--- class: 0  
| | | | | | |--- Airport Country Code_BR > 0.50  
| | | | | | |--- Departure Month <= 10.50  
| | | | | | |--- Ticket Price <= 522.50  
| | | | | | |--- Departure Month <= 3.50  
| | | | | | | | |--- class: 1  
| | | | | | | | |--- Departure Month > 3.50  
| | | | | | | | |--- class: 0  
| | | | | | | |--- Ticket Price > 522.50  
| | | | | | | |--- Departure Day <= 30.50  
| | | | | | | | |--- class: 0  
| | | | | | | | |--- Departure Day > 30.50  
| | | | | | | | |--- class: 0  
| | | | | | | |--- Departure Month > 10.50  
| | | | | | | |--- Ticket Price <= 3923.00  
| | | | | | | |--- Departure Day <= 12.00  
| | | | | | | | |--- class: 0  
| | | | | | | |--- Departure Day > 12.00  
| | | | | | | | |--- class: 0  
| | | | | | | |--- Ticket Price > 3923.00  
| | | | | | | | |--- class: 1  
| | | | | | |--- Airport Country Code_ID > 0.50  
| | | | | | |--- Ticket Price <= 1313.50  
| | | | | | |--- Ticket Price <= 1293.00  
| | | | | | |--- Departure Day <= 17.50  
| | | | | | | |--- Ticket Price <= 1071.50  
| | | | | | | | |--- class: 0  
| | | | | | | |--- Ticket Price > 1071.50  
| | | | | | | | |--- class: 0  
| | | | | | | |--- Departure Day > 17.50  
| | | | | | | |--- Departure Month <= 10.50
```

```
| | | | | | | | | --- class: 0  
| | | | | | | | | --- Departure Month > 10.50  
| | | | | | | | | --- class: 1  
| | | | | | | | | --- Ticket Price > 1293.00  
| | | | | | | | | --- class: 1  
| | | | | | | | | --- Ticket Price > 1313.50  
| | | | | | | | | --- class: 0  
| | | | | | | | | --- Airport Country Code_CN > 0.50  
| | | | | | | | | --- Ticket Price <= 1242.00  
| | | | | | | | | --- Ticket Price <= 776.50  
| | | | | | | | | --- Ticket Price <= 740.00  
| | | | | | | | | --- Departure Month <= 9.50  
| | | | | | | | | --- Ticket Price <= 436.00  
| | | | | | | | | --- class: 0  
| | | | | | | | | --- Ticket Price > 436.00  
| | | | | | | | | --- class: 0  
| | | | | | | | | --- Departure Month > 9.50  
| | | | | | | | | --- class: 0  
| | | | | | | | | --- Ticket Price > 740.00  
| | | | | | | | | --- Departure Month <= 3.50  
| | | | | | | | | --- class: 0  
| | | | | | | | | --- Departure Month > 3.50  
| | | | | | | | | --- class: 1  
| | | | | | | | | --- Ticket Price > 776.50  
| | | | | | | | | --- Departure Day <= 6.50  
| | | | | | | | | --- Ticket Price <= 1220.00  
| | | | | | | | | --- Ticket Price <= 823.00  
| | | | | | | | | --- class: 0  
| | | | | | | | | --- Ticket Price > 823.00  
| | | | | | | | | --- class: 0  
| | | | | | | | | --- Ticket Price > 1220.00  
| | | | | | | | | --- class: 1  
| | | | | | | | | --- Departure Day > 6.50
```

| | | | | | | | |--- Departure Day <= 14.50
| | | | | | | | |--- Departure Month <= 9.50
| | | | | | | | |--- class: 0
| | | | | | | | |--- Departure Month > 9.50
| | | | | | | | |--- class: 1
| | | | | | | | |--- Departure Day > 14.50
| | | | | | | | |--- Departure Month <= 7.50
| | | | | | | | |--- class: 0
| | | | | | | | |--- Departure Month > 7.50
| | | | | | | | |--- class: 0
| | | | | |--- Ticket Price > 1242.00
| | | | | |--- Ticket Price <= 1988.00
| | | | | | |--- Departure Month <= 9.50
| | | | | | |--- Departure Month <= 5.50
| | | | | | | |--- Departure Month <= 3.50
| | | | | | | | |--- class: 1
| | | | | | | | |--- Departure Month > 3.50
| | | | | | | | |--- class: 1
| | | | | | | | |--- Departure Month > 5.50
| | | | | | | | |--- Departure Month <= 8.50
| | | | | | | | |--- class: 0
| | | | | | | | |--- Departure Month > 8.50
| | | | | | | | |--- class: 0
| | | | | | |--- Departure Month > 9.50
| | | | | | | |--- class: 1
| | | | | | |--- Ticket Price > 1988.00
| | | | | | |--- Departure Month <= 3.50
| | | | | | | |--- class: 1
| | | | | | |--- Departure Month > 3.50
| | | | | | | |--- Departure Day <= 25.00
| | | | | | | | |--- Departure Month <= 7.50
| | | | | | | | |--- class: 0
| | | | | | | | |--- Departure Month > 7.50

										---	class:	1
										---	Departure Month >	5.50
										---	Departure Month <=	8.50
										---	class:	0
										---	Departure Month >	8.50
										---	class:	0
										---	Departure Month >	9.50
										---	class:	1
										---	Ticket Price >	1988.00
										---	Departure Month <=	3.50
										---	class:	1
										---	Departure Month >	3.50
										---	Departure Day <=	25.00
										---	Departure Month <=	7.50
										---	class:	0
										---	Departure Month >	7.50
										---	class:	0
										---	Departure Month >	8.50
										---	class:	0
										---	Departure Month >	9.50
										---	class:	1
										---	Ticket Price >	1988.00
										---	Departure Month <=	3.50
										---	class:	1
										---	Departure Month >	3.50
										---	Departure Day <=	25.00
										---	Departure Month <=	7.50
										---	class:	0
										---	Departure Month >	7.50
										---	Departure Month >	9.50
										---	class:	1
										---	Ticket Price >	1988.00
										---	Departure Month <=	3.50

```
| | | | | | | | | |--- class: 1
| | | | | | | |--- Departure Month > 3.50
| | | | | | | |--- Departure Day <= 25.00
| | | | | | | | | |--- Departure Month <= 7.50
| | | | | | | | | |--- class: 0
| | | | | | | | | |--- Departure Month > 7.50
| | | | | | | | | |--- class: 1
| | | | | | | |--- Departure Month > 3.50
| | | | | | | |--- Departure Day <= 25.00
| | | | | | | | | |--- Departure Month <= 7.50
| | | | | | | | | |--- class: 0
| | | | | | | | | |--- Departure Month > 7.50
| | | | | | | | | |--- Departure Month > 7.50
| | | | | | | | | |--- class: 0
| | | | | | | | | |--- class: 0
| | | | | | | |--- Departure Day > 25.00
| | | | | | | | | |--- class: 0
| |--- Departure Month > 11.50
| |--- class: 1
```