Flight Ticket Price Prediction

Detailed Project Report

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PROJECT DETAIL

Project Title	Mushroom Classification
Technology	Machine Learning Technology
Domain	Agriculture
Project Difficulty level	Intermediate
Programming Language Used	Python
Tools Used	Jupyter Notebook, Vscode, GitHub,MongoDB compass

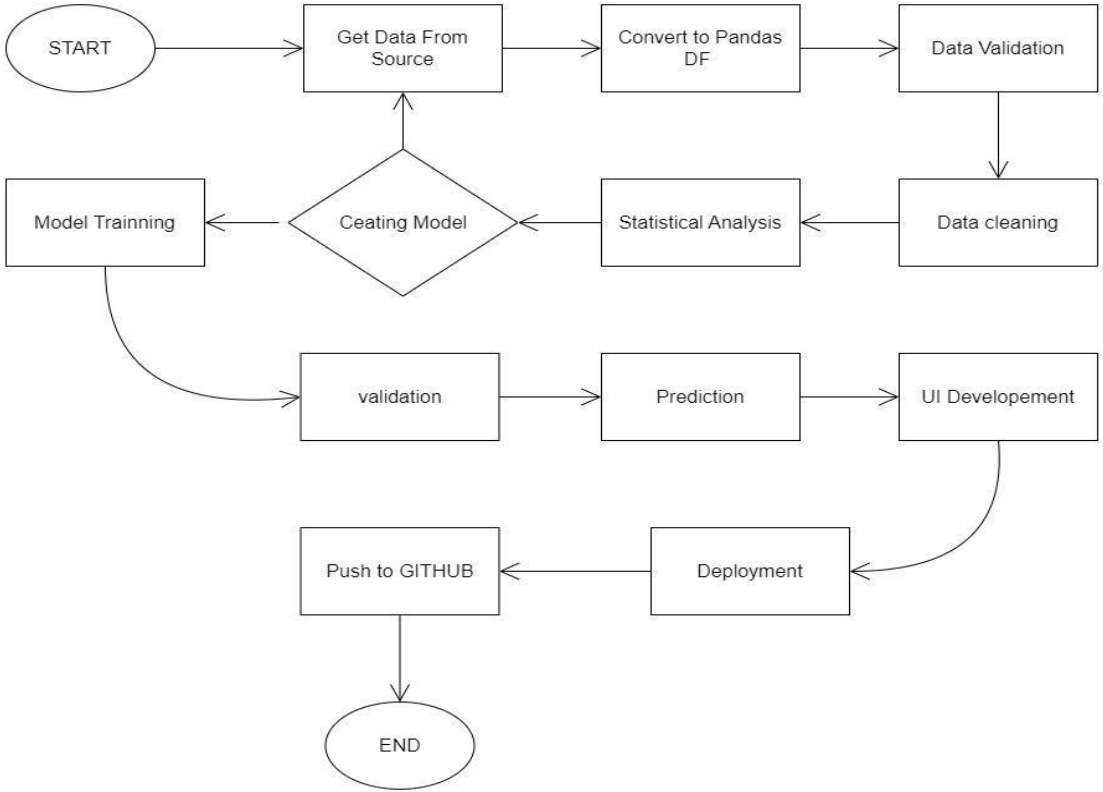
OBJECTIVE

- The main goal is to predicting the fare price of a flight ticket.

PROBLEM STATEMENT

- For purchasing an airplane ticket, the traditional purchase approach is to buy a ticket far in advance of the flight's departure date to avoid the risk that the price may increase quickly before the date of departure. However, this is not always the case; if airline corporations wish to increase sales, they can lower prices. Airlines employ a variety of factors to decide flight ticket rates, including whether the trip is around the holidays, the quantity of available seats on the plane, and even the month. Some of the variables can be seen, while others are hidden. In this context, customers are attempting to discover the best day to purchase a ticket, while airline firms, on the other hand, are attempting to maximize overall revenue.

ARCHITECTURE



DATASET INFORMATION

- Size of test set: 2671 records
- FEATURES: Airline: The name of the airline.
- Date_of_Journey: The date of the journey
- Source: The source from which the service begins.
- Destination: The destination where the service ends.
- Route: The route taken by the flight to reach the destination.
- Dep_Time: The time when the journey starts from the source.
- Arrival_Time: Time of arrival at the destination.
- Duration: Total duration of the flight.
- Total_Stops: Total stops between the source and destination.
- Additional_Info: Additional information about the flight
- Price: The price of the ticket

KEY PERFORMANCE INDICATOR (KPI)

Thus, by using the Wrapper method and Filter method, the Key Attributes that contributed to the better Price of flight ticket. The attributes that have been found to be the best ones from both the attribute selection methods are compared. It is found that both the attribute selection methods almost gave the same results as the output. Hence by using these attributes as the key attributes, there will be better accuracy in the Price of flight ticket.

PERFORMANCE

Performance is quite good, as you can see below accuracy score for training set is 95.78% and accuracy score for test set is 79.65%.

```
# Model Performance

print('Model Performance on Training Set:', round(model.score(train_x, train_y)*100,2))
print('Model Performance on Test Set:', round(model.score(test_x, test_y)*100,2))
```

```
Model Performance on Training Set: 95.78
Model Performance on Test Set: 79.65
```

CONCLUSION

This project the methods of pre-processing, steps to identify the key attributes that help in the better Price of flight ticket for a given set of travel details, like: departure date, arrival date, departure city, arrival city, stoppages, and the airline carrier.

THANK YOU