Airline Passenger Satisfaction Prediction Models

Model

All ▾

Model	f1-score ▾	precision	recall	support
LightGBM	0.98	0.98	0.98	2345
Random Forest	0.98	0.98	0.97	2345
Decision Tree	0.97	0.97	0.97	2345
KNN	0.97	0.97	0.97	2345
SVM	0.97	0.96	0.97	2345
AdaBoost	0.95	0.93	0.97	2345
LabelPropagation	0.94	0.92	0.97	2345
Label Spreading	0.94	0.94	0.94	2345
LogisticRegression	0.94	0.93	0.94	2345
Naive Bayesian	0.92	0.94	0.90	2345
DummyClassifier	0.70	0.54	1.00	2345

Best Performing Model

LightGBM

0.98
f1-score

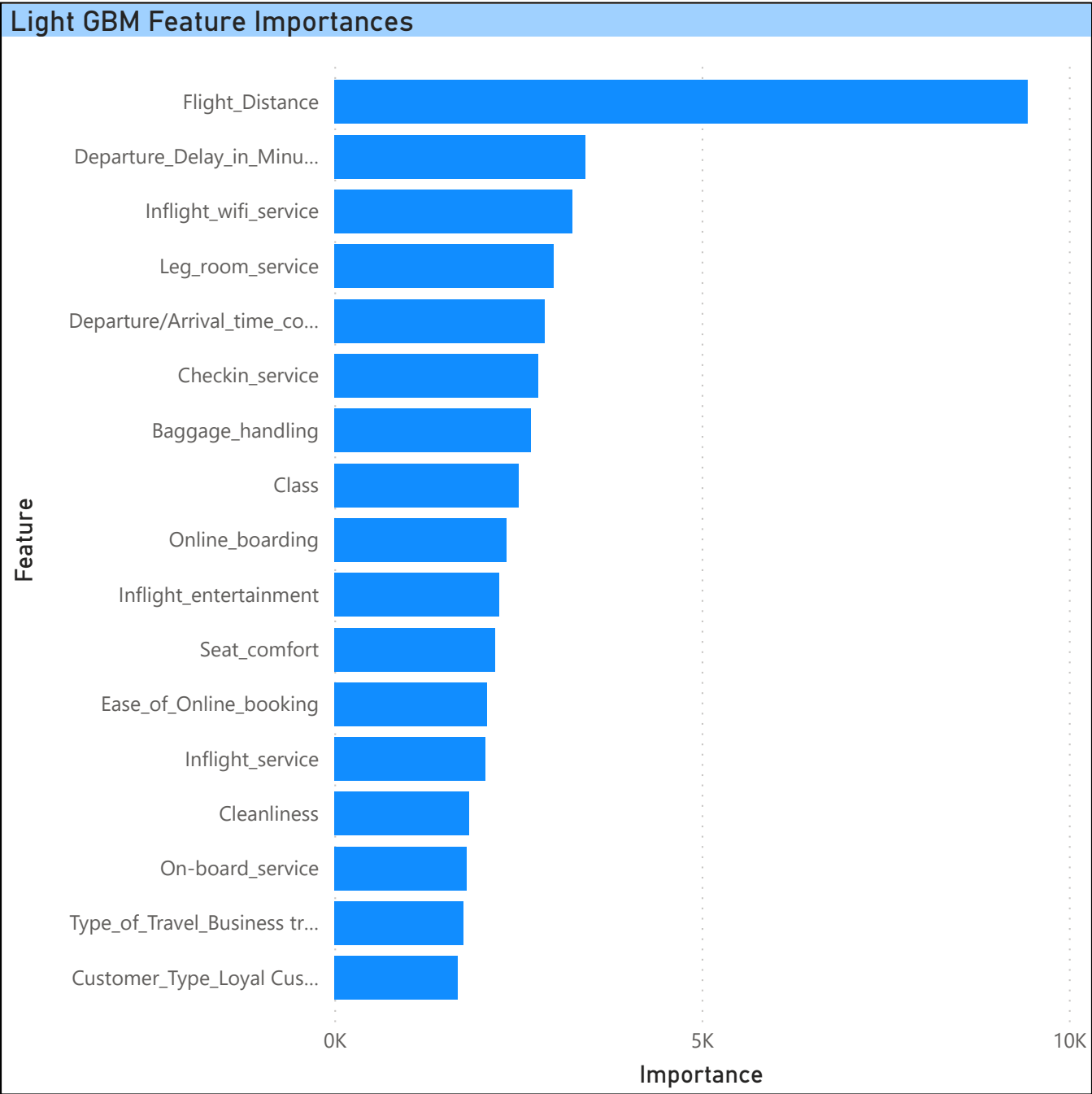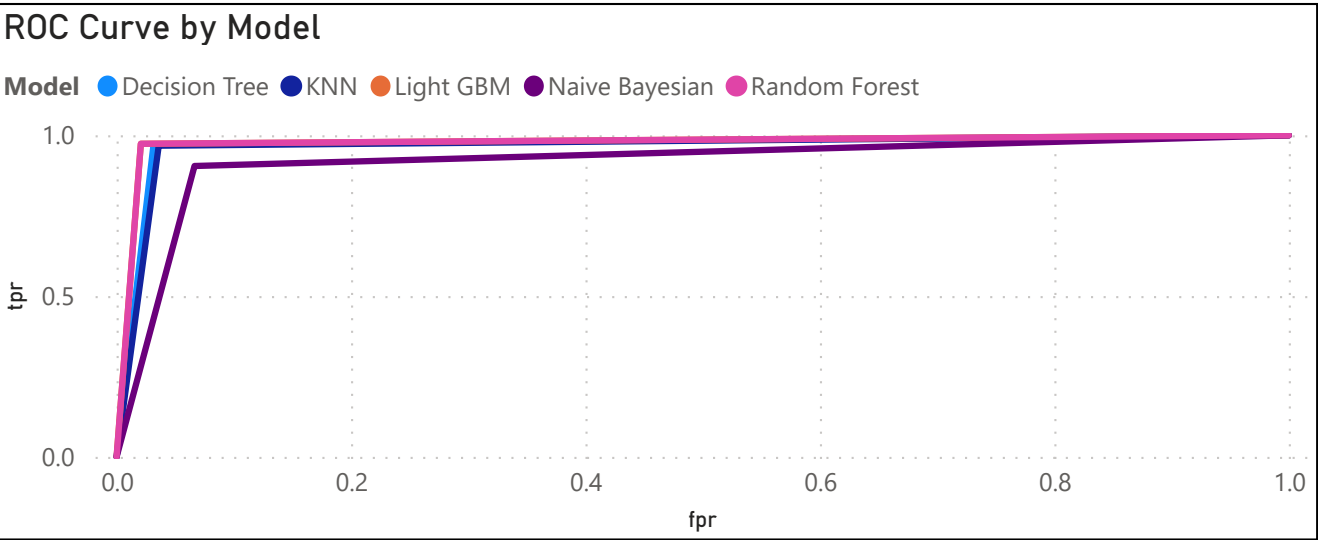0.98
precision

0.98
recall

2345
support

| Select all | Decision Tr... | KNN | Light GBM | Naive Baye... | Random Fo... |

ROC Curve by Model

Model ● Decision Tree ● KNN ● Light GBM ● Naive Bayesian ● Random Forest

Light GBM Feature Importances

Business Insights

Satisfaction by Flight Distance

satisfaction ● 0 ● 1

Satisfaction by Inflight Wifi Service

Satisfaction

19.96K (45.42%)

24K (54.58%)
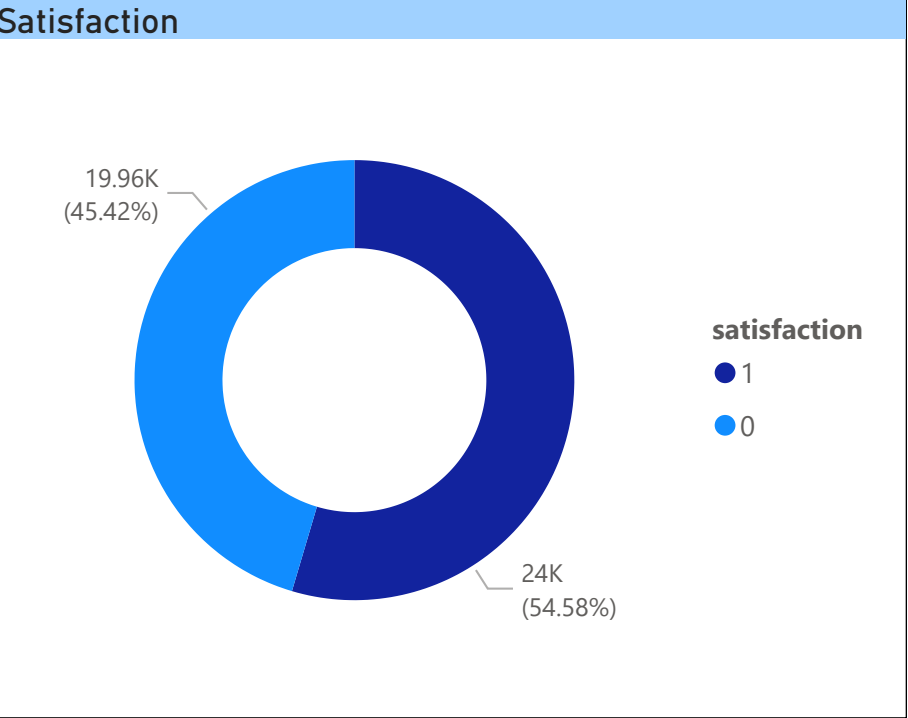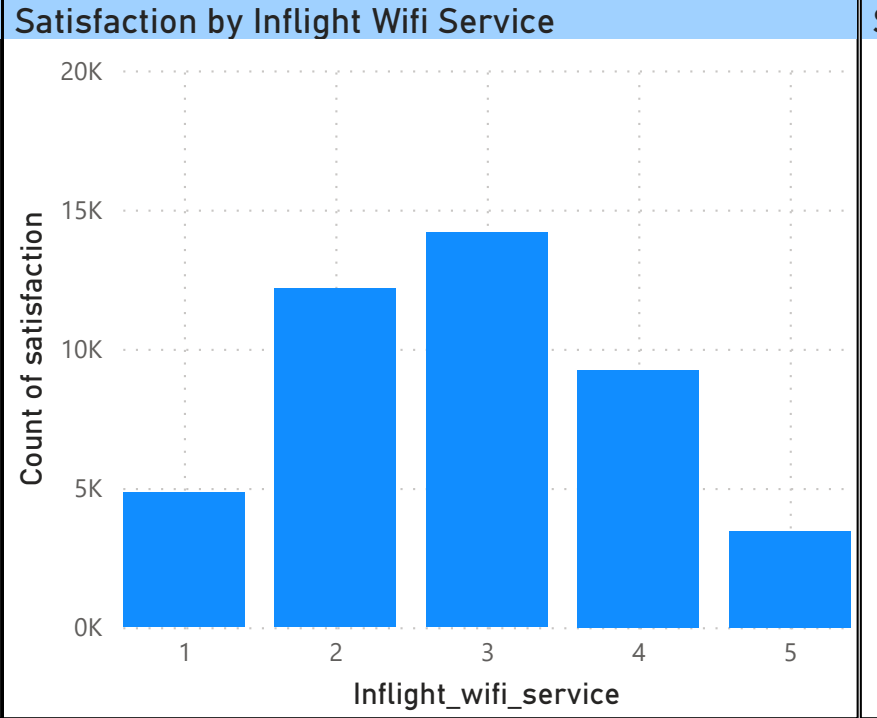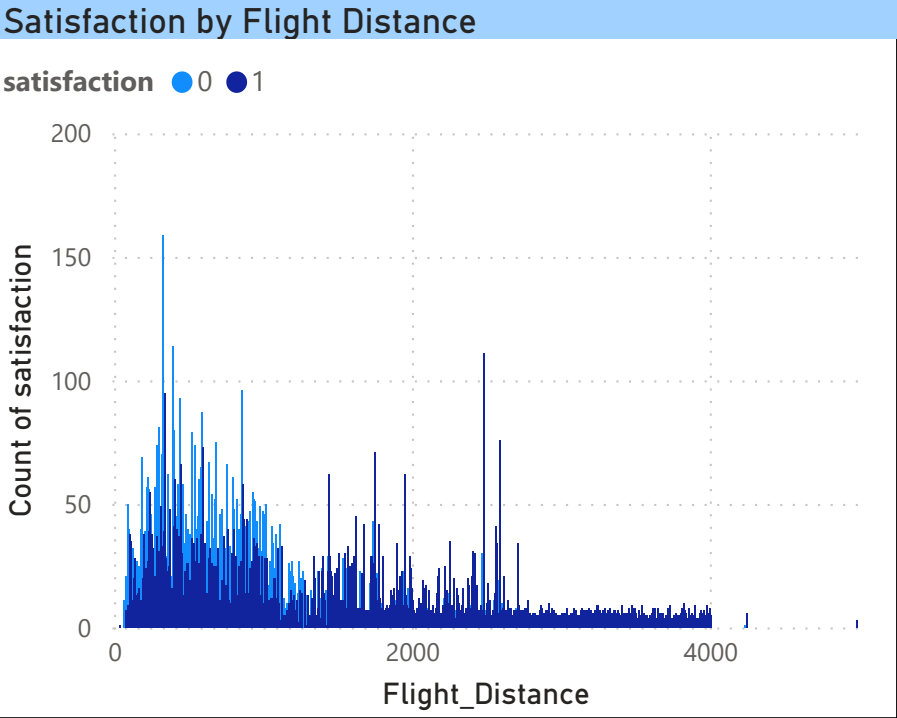
satisfaction
● 1
● 0

1.32K
Average flight distance

43.96K
Count of satisfaction

Satisfaction Ratio

0.54 !

Goal: 0.75 (-27.91%)

Average Departure Delay by Month

6.57 !

Goal: 5 (-31.46%)