Airline Consumer Satisfaction

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Course: CAP4770: Data Mining
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INTRODUCTION

Problem: Discovering satisfaction

Motivation: This is important to solve for airlines and will benefit airlines as higher satisfaction means more money

Solution: Dataset contains 104,000 entries so a computational solution makes it far easier to spot trends and identify areas of improvement

Preferred satisfaction should be >90% as any less could mean a discontinuation of service.

Preliminary Results

Tables here from project step 4

Attributes	Description	Nominal/Numeric
Gender	Gender of the passengers (Female, Male)	Nominal
Customer Type	The customer type (Loyal customer, disloyal customer)	Nominal
Age	The actual age of the passengers	Numeric
Type of Travel	Purpose of the flight of the passengers (Personal Travel, Business Travel)	Nominal
Class	Travel class in the plane of the passengers (Business, Eco, Eco Plus)	Nominal
Flight distance	The flight distance of this journey	Numeric
Inflight Wi-Fi service	Satisfaction level of the inflight Wi-Fi service	Numeric
Departure/Arrival time convenient	Satisfaction level of Departure/Arrival time convenient (1-5)	Numeric
Ease of Online booking	Satisfaction level of online booking (1-5)	Numeric
Gate location	Satisfaction level of Gate location (1-5)	Numeric
Food and drink	Satisfaction level of Food and drink (1-5)	Numeric
Online boarding	Satisfaction level of online boarding (1-5)	Numeric
Seat comfort	Satisfaction level of Seat comfort (1-5)	Numeric
Inflight entertainment	Satisfaction level of inflight entertainment (1-5)	Numeric
On-board service	Satisfaction level of On-board service (1-5)	Numeric
Leg room service	Satisfaction level of Leg room service (1-5)	Numeric
Baggage handling	Satisfaction level of baggage handling (1-5)	Numeric
Check-in service	Satisfaction level of Check-in service (1-5)	Numeric
Inflight service	Satisfaction level of inflight service (1-5)	Numeric
Cleanliness	Satisfaction level of Cleanliness (1-5)	Numeric
Departure Delay in Minutes	Minutes delayed when departure	Numeric
Arrival Delay in Minutes	Minutes delayed when Arrival	Numeric
Satisfaction	Airline satisfaction level (Satisfaction, neutral or dissatisfaction)	Nominal

Figure 1. Attributes and their values & meaning

Methodology

Data: Kaggle is providing data (fig. 1)
Class: Satisfaction which is a form of binary classification (130k total instances)
Tables included here for class distributions

Preprocessing:List filters used changes made to make data function in weka

Models: List all classifiers used and baseline used

Experimental setup:Validation methods + attribute selections

Implementation: List how data was analyzed, extracted, and outside tools used

Next Steps

References