



# Airline Customer Satisfaction

Classification Modeling to Predict Customer Satisfaction

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# Summary

Construct classification model to predict customer satisfaction, & glean insight into the following elements of the customer experience:

- Online boarding
- Wifi service
- Travel class

# Outline

Business Context

Data

Modeling results

Recommendations

Limitations/ Further Exploration

Thank you

# Business Context

**A satisfied customer is a repeat customer.**

- Identify customers who are likely to be dissatisfied
- Devise & implement targeted policies to avoid dissatisfaction

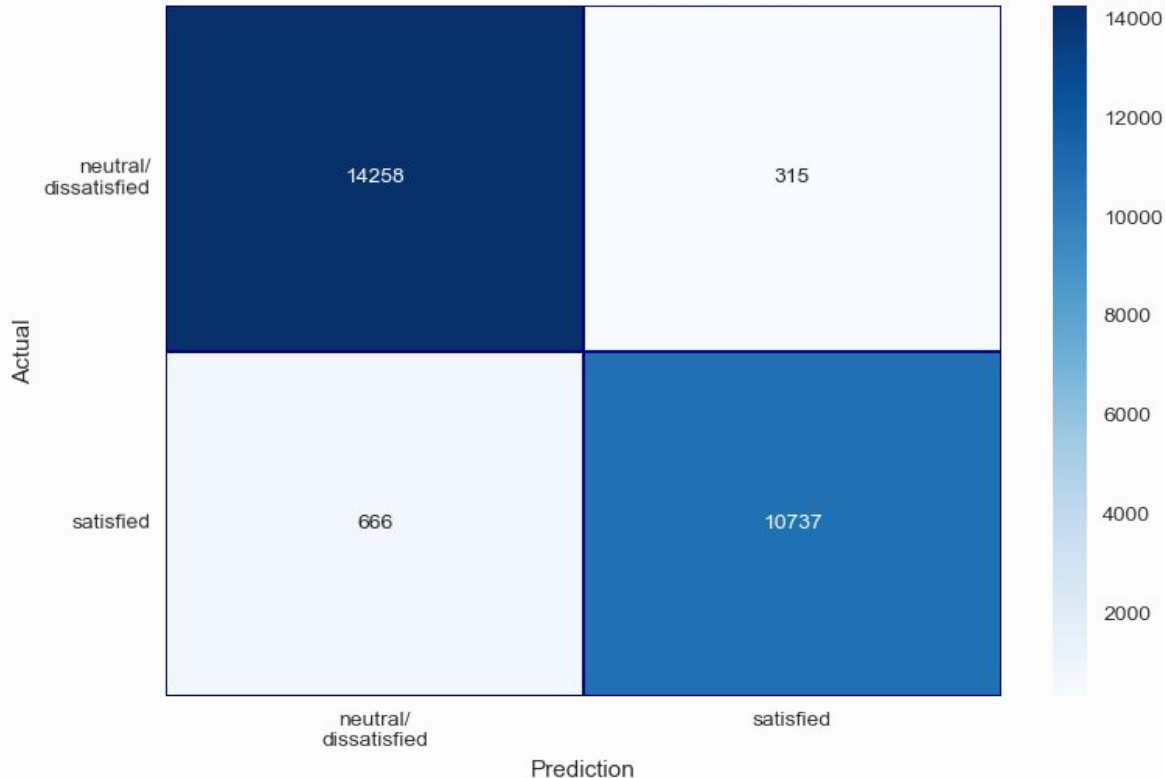
# Data

- Airline passenger survey
- ~130k records (80/20 train/test split)
- Mostly customer ratings
- Some objective descriptors



# Modeling Results

Random Forest Classifier Confusion Matrix

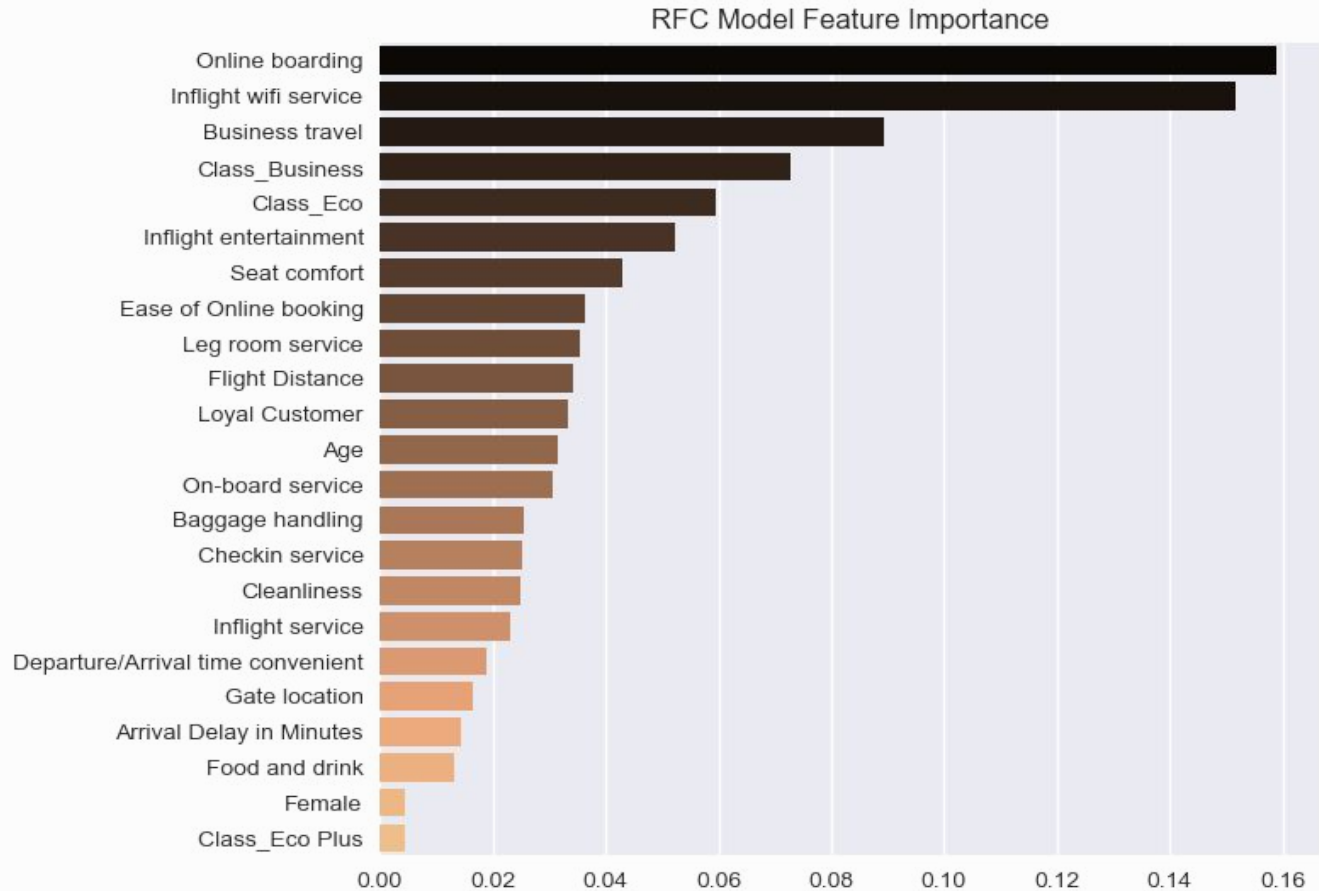


## Class 0 (Dissatisfied)

- Accuracy - .96
- **Recall - .97**
- Precision - .95

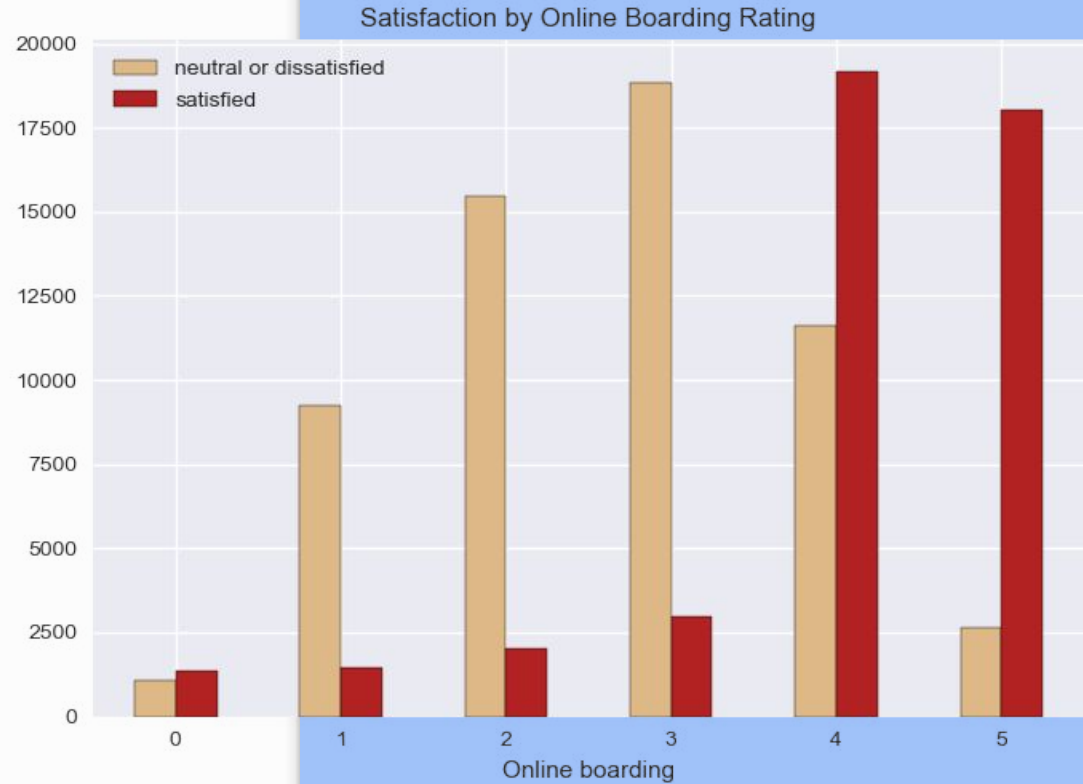
# Modeling Results

Feature  
Importance



# Online Boarding

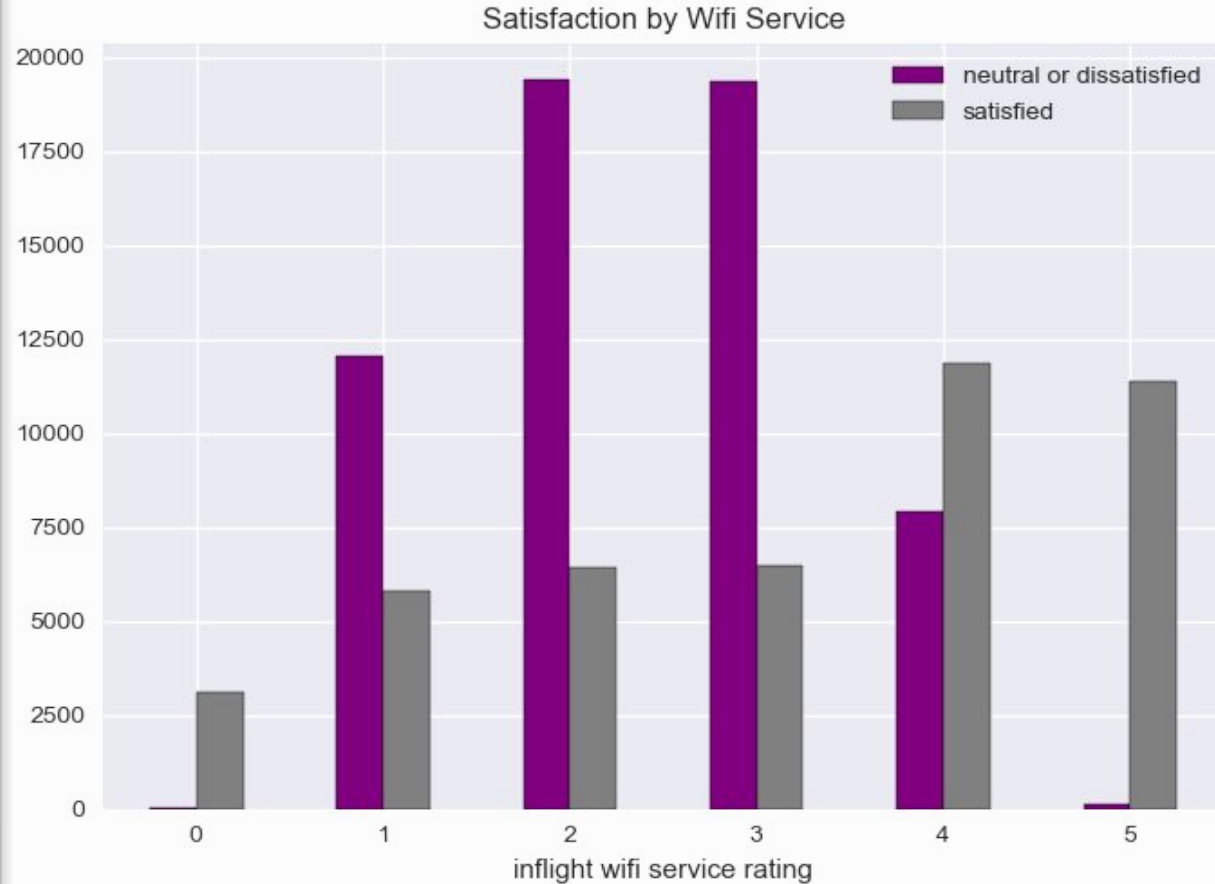
*Satisfaction jumps  
with high rating*





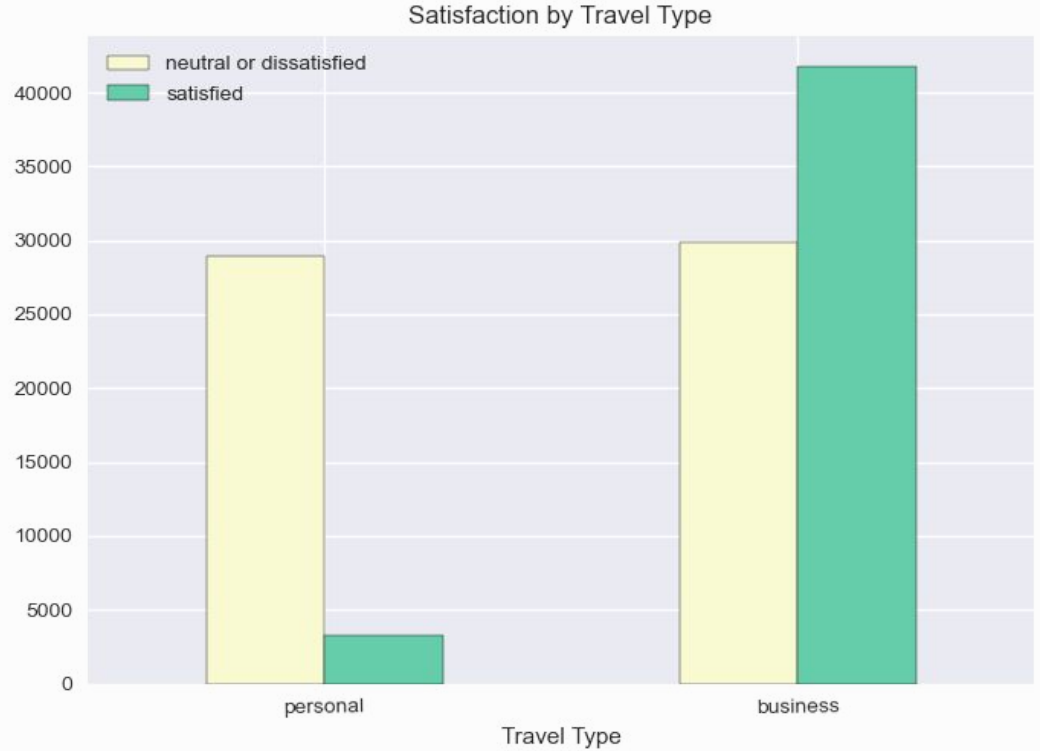
# Inflight Wifi

*High rating = Satisfied* →

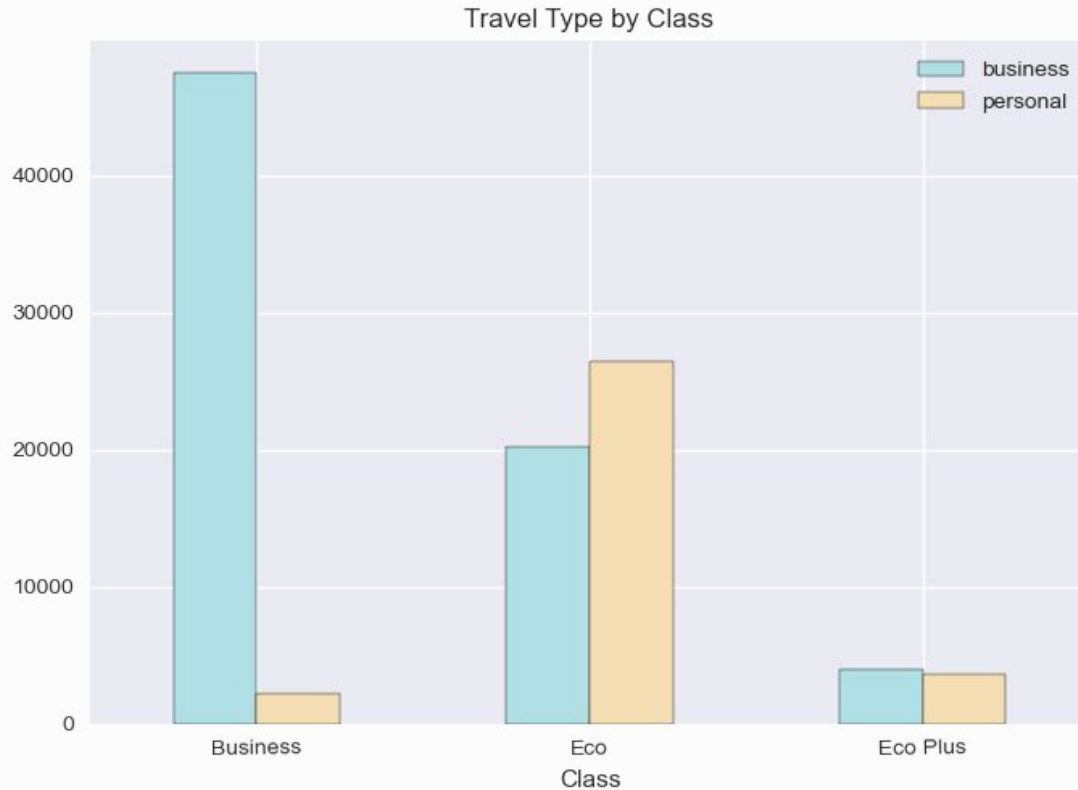


# Type of Travel

*Business travelers have a  
drastically higher satisfaction  
rate*



# Class & Type of Travel



*Business travelers are far more likely to travel business class*



# Recommendations

- Intuitive Online Boarding
- Fast, reliable, affordable Wifi
- Improve service & amenities to Eco Class

# Limitations/Further Exploration

- Obtain text based reviews
- Additional hyperparameter tuning
- Consider another metric

# Thanks!

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