
Online Shoppers Intent

Introduction

We are Data Scientists with the team behind datascience-courses.com

We have used Machine Learning to predict which shoppers have an intent to buy from our store.

We can use this information to aid our shoppers with 1:1 personal shopping assistance using the new chat box feature for the site.

Methodology

- A decision tree was was used as baseline model

- We explored more models

  1. Logistic Regression and
  2. Random Forest.

- Two routes were taken for hyperparameter optimisation:
  1. Grid Search CV
  2. Random Search CV

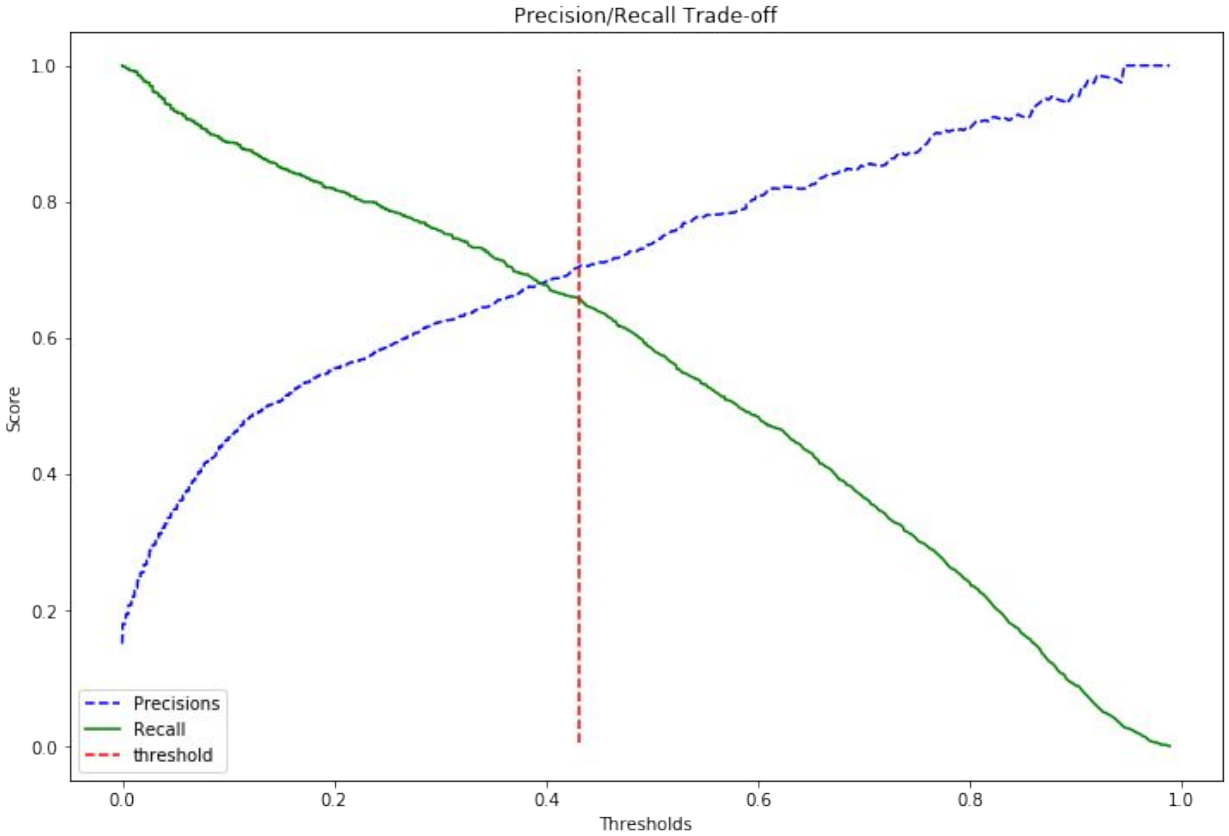
Results

Logistic Regression AUC: 0.92

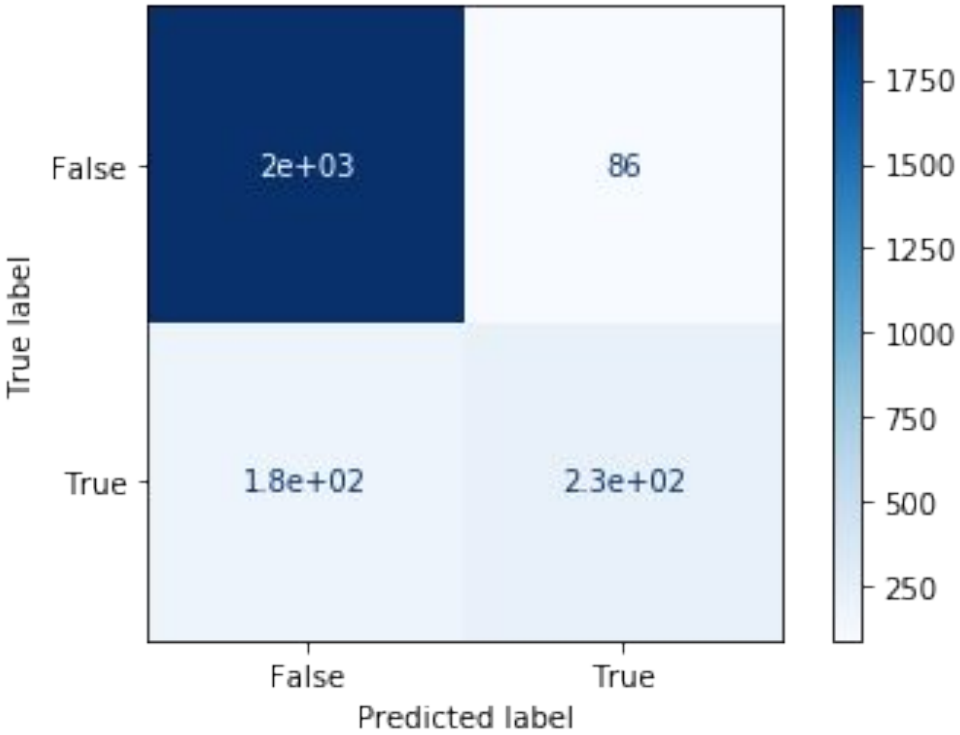
Random Forest AUC: 0.93

Threshold Selection: 0.43

Visual of Precision-Recall Curve



Visual of Confusion Matrix



Conclusion

We found that a random forest model learned our data best.

The model has 0.93 Area Under Curve, a 93% chance to rank a random positive value more highly than a negative value. Taking into account costs of error we predicted:

Our business model was able to learn from the user data and can accurately say whether a visitor is likely to **produce revenue**.

We can now take measures to provide assistance to potential customers we deem can benefit from our 1:1 chat service.


Thank You // Questions