Eco Oasis Suites

Investigating Hotel Reservation Cancelations

Agenda

Topics Covered

Business Problem

Data

Methods

Results

Benefits of Deployment

Next Steps

Business Problem

Eco Oasis has an **increasing number of canceled reservations**, posing a significant challenge to its overall profitability.

We leveraged classification analysis to **identify reservations likely to cancel** at their booking time to allow appropriate time for **intervention.**
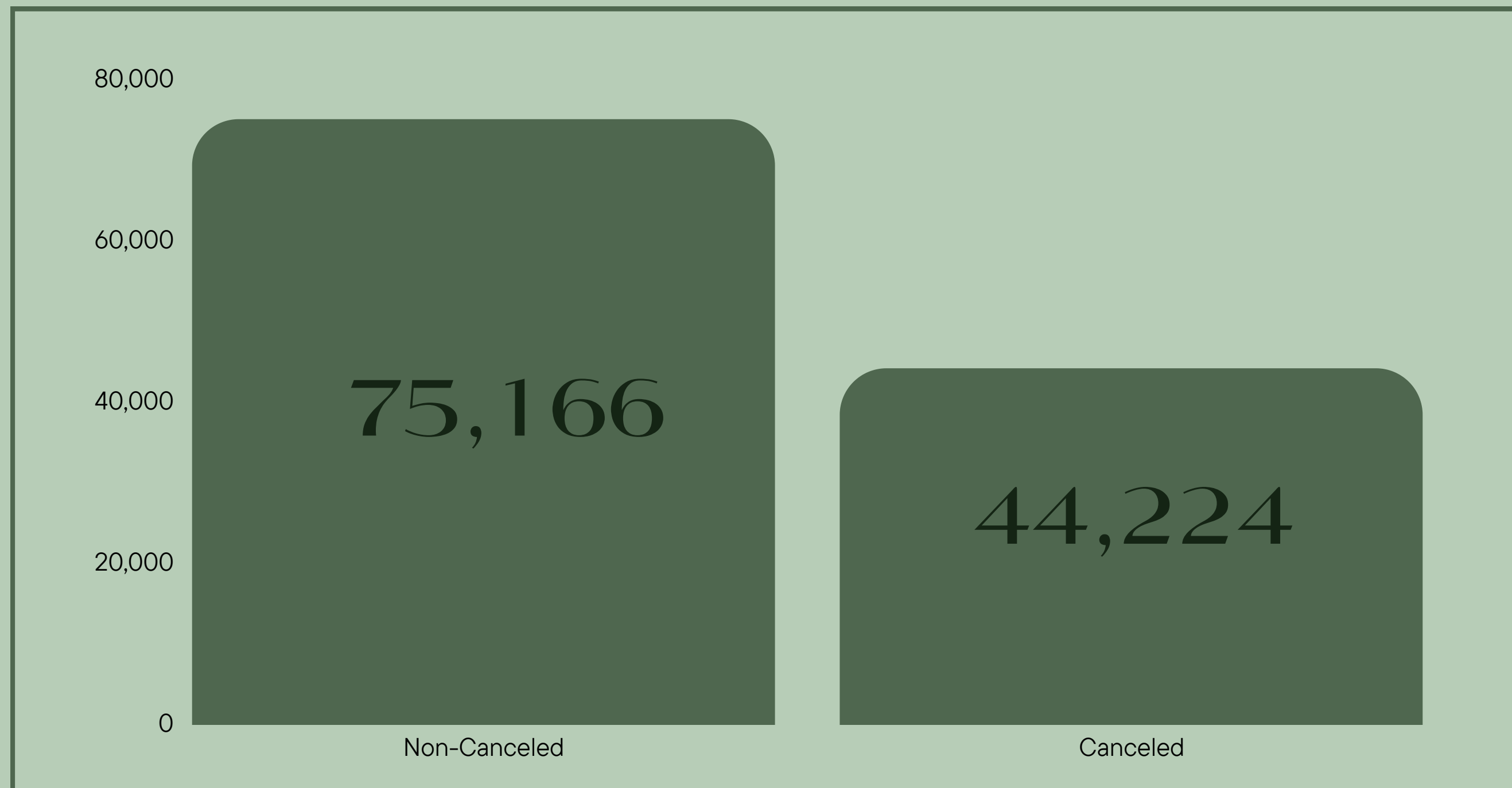
The Data
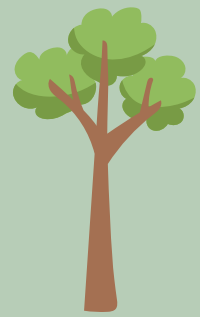
Over 119K Reservations

31 Reservations Variables Considered

Distribution of Canceled Reservations

The dataset was unbalanced with only 44k canceled reservations.
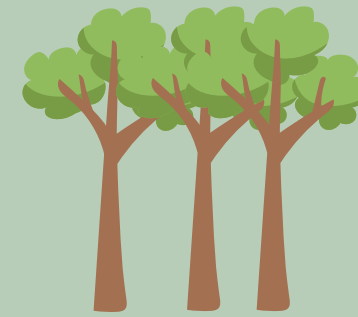
Methods: Classification

Baseline Model

Start with a Simple Model.

SMOTE

Create Synthetic Data.

Random Forest

Test more complex model.

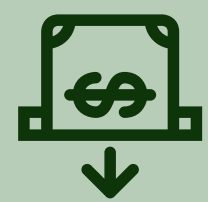**GridSearch**

Find Best Parameters.

Results

The final model correctly identified **68% of canceled reservations.**

68%

Deposit Type and Special Requests were the most important factors leading to cancelations.

Recommendations:

Provide **incentives** for customers **to leave a deposit** when booking like a discount, meal voucher, etc.

Limit the number of **special requests** customers are allowed to make at the time of booking.

Benefits of Deployment

Enables **proactive intervention** strategies that allocate resources effectively for **targeted retention** efforts.

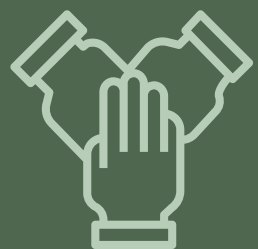Provides **valuable insights** into the underlying drivers of cancelations.

Next Steps

Continual **monitoring and evaluation** of model performance

Regular **updates and iterations** based on real-time data insights

Collaboration with internal teams to **facilitate integration** into broader business strategies

Thank you!

Email: loyolaangela1@gmail.com
GitHub: @angelaloyola
LinkedIn: linkedin.com/in/angelaloyola/