



PROJECT

ABSHERON HOTEL GROUP



GROUP-RDS102

TEACHER-EMRE YAZICI



Agenda

1 About the Company

2 Our Mission and Vision

3 Project

4 Our Goals

5 Our Strategy

6 Statistics and Analysis

7 Result



ABOUT

WITH THE ESTABLISHMENT OF THE COMPANY IN 2013, THE GROUP AIMS TO BECOME A STRATEGIC HOSPITALITY INDUSTRY PLAYER WITH A MEDIUM-TERM ASPIRATION OF TAKING A LEADING POSITION IN THE NATIONAL AND REGIONAL MARKETS THROUGH ESTABLISHING A WORLD-CLASS PORTFOLIO OF HOTELS AND RESORTS. THIS PORTFOLIO STRETCHES ACROSS VARIOUS HOTEL CATEGORIES FROM MID-SCALE TO LUXURY HOTELS AND OTHER HOSPITALITY ENTITIES BOTH IN AND OUTSIDE OF AZERBAIJAN.

Hotel cancellation prediction



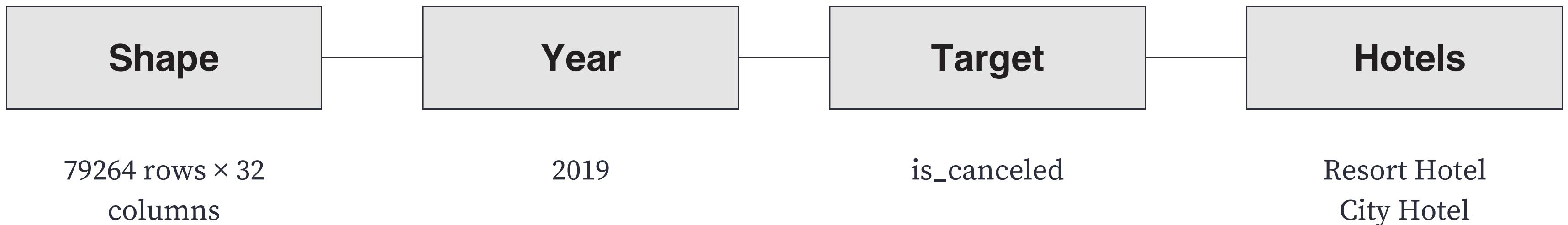


Planning

1. Perform the Feature Engineering to make new features
2. Perform the Data Selection to select only relevant features
3. Data Exploration and Visualization
4. Transform the Data
5. Split the data
6. Model the data and finally Evaluate our model

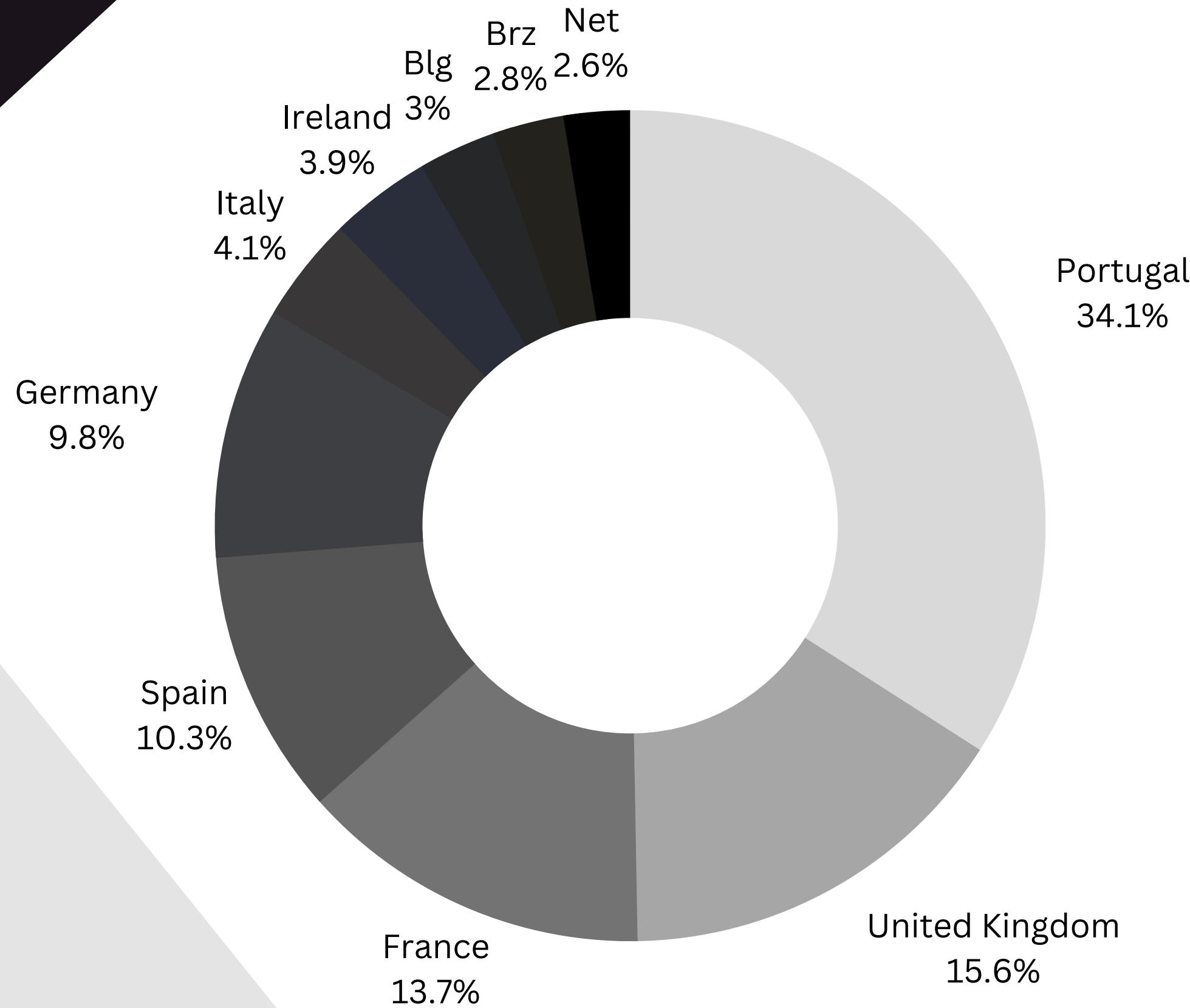
HOTEL BOOKING

Dataset



Country

It appears that a disproportionately high number of bookings are from Portugal, probably because the hotel is located in Portugal itself. The second country is the United Kingdom which is approx.



What is the price guests pay for one night in a room?

The average prices are



Resort hotel

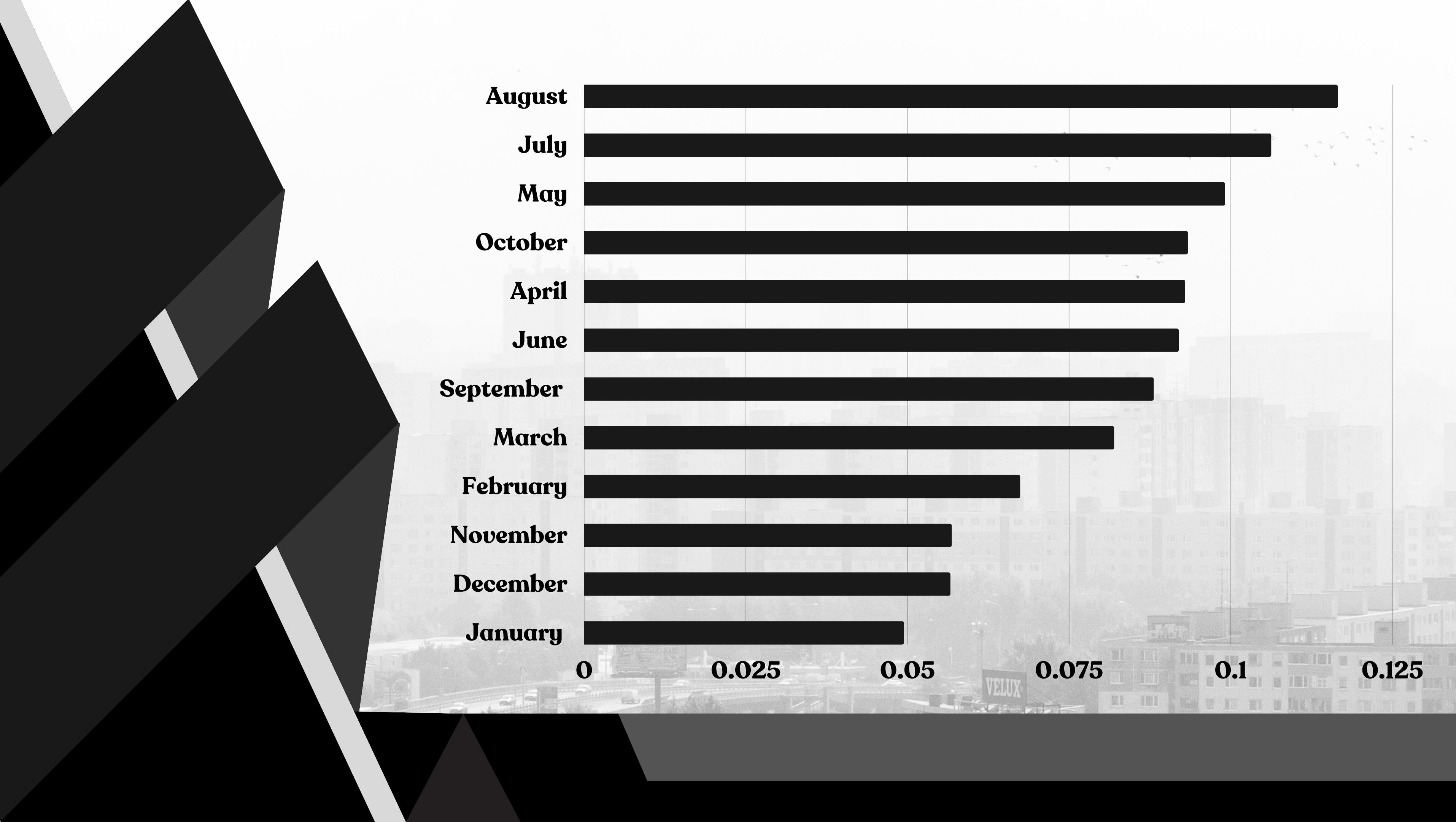
44.21 € per night and person.



City hotel

56.73 € per night and person.

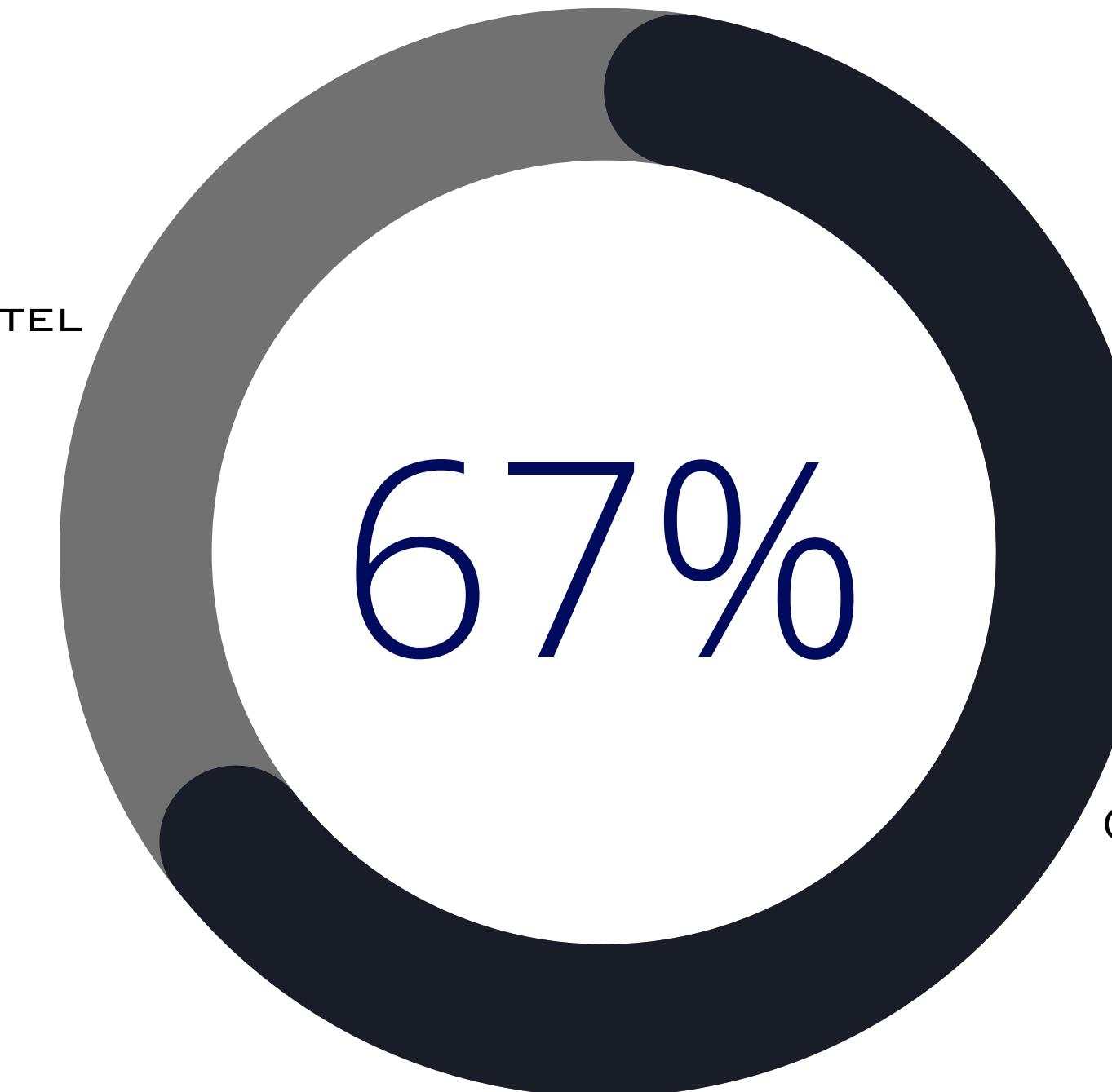






OUR HOTELS SERVICE EFFECTIVITY

RESORT HOTEL

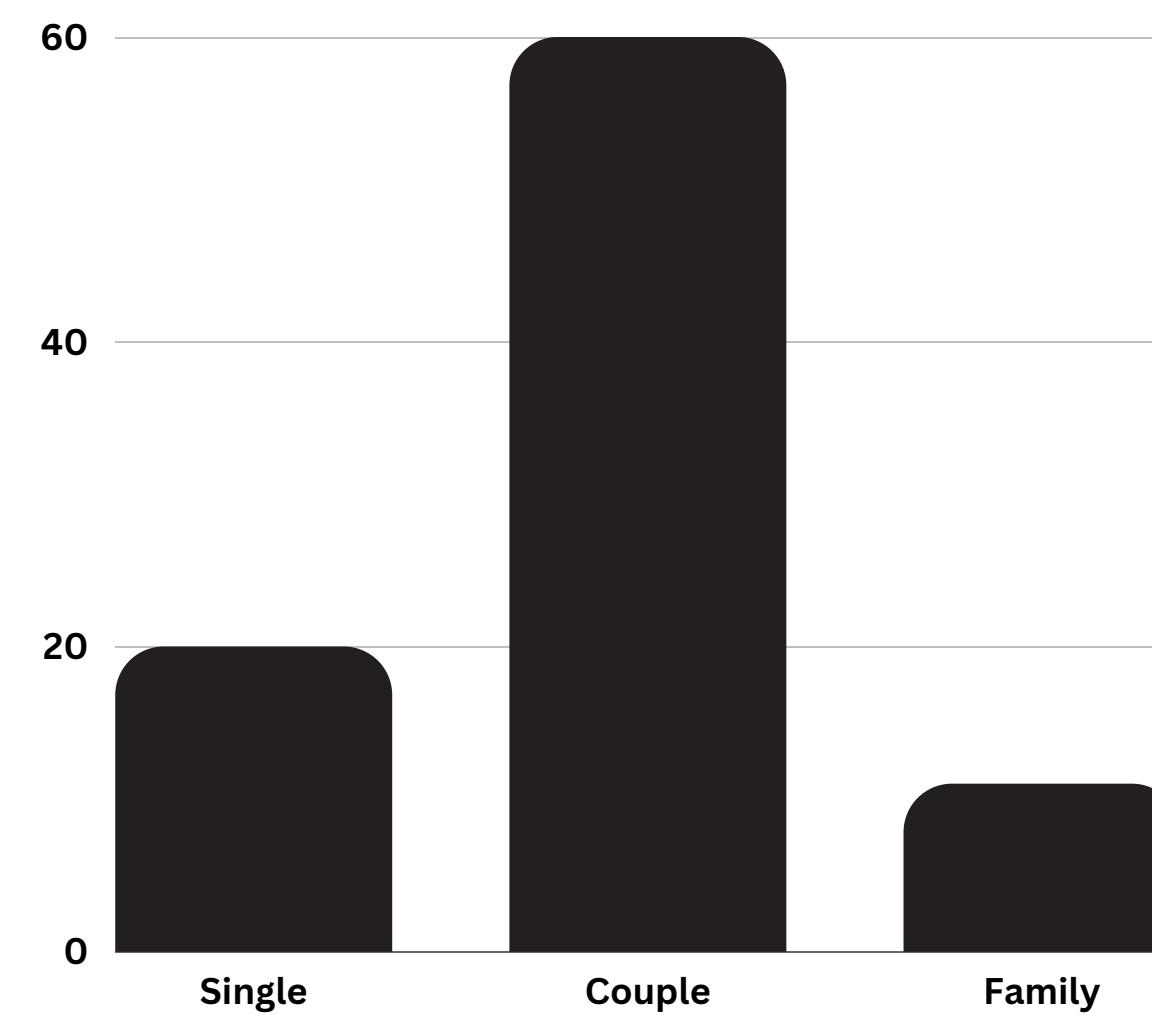


67%

City Hotel

HOTEL GUEST RATIO

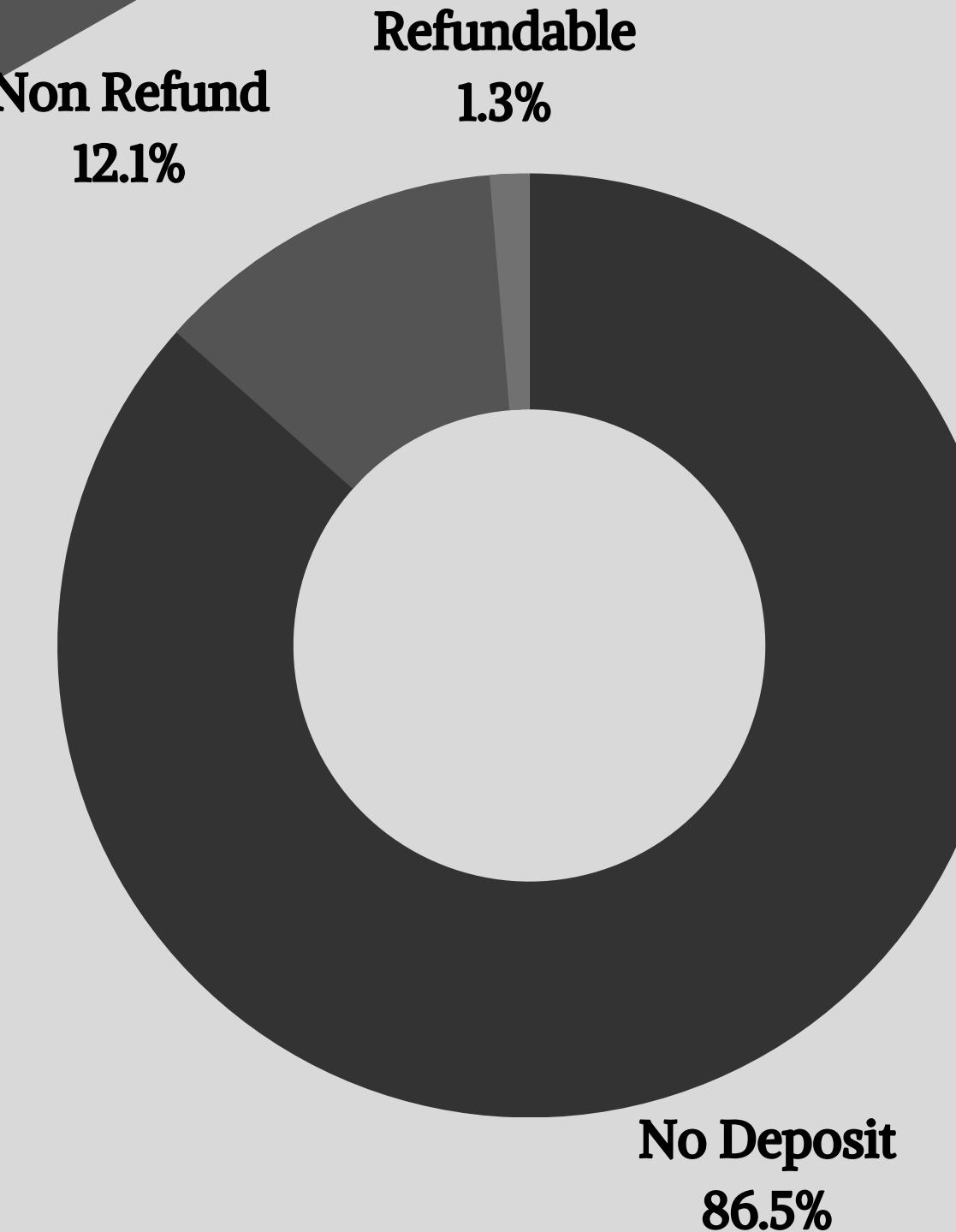
Accommodation type





Check if the booking name was from a
repeated guest (1) or not (0)





Indication on if the customer made a deposit to guarantee the booking.

This variable can assume three categories:

No Deposit — no deposit was made;

Non Refund — a deposit was made in the value of the total stay cost;

Refundable — a deposit was made with a value under the total cost of stay.

New Feature



Pca_column and Lda_column

"pca_column" and "lda_column" are newly engineered features that enhance our dataset, providing valuable insights for analysis.



Labels

"labels" serve as target variables or categories that help us classify and predict booking demand effectively.



Is_holiday

"is_holiday" is a feature that identifies holiday periods, allowing us to examine their impact on reservation demand.



adr_pp and price_category

"adr_pp" represents the Average Daily Rate (ADR) per room, serving as a crucial metric for improving pricing strategies. "price_category" and "daily_price_change" are essential features that capture pricing dynamics, aiding in pricing strategy optimization and demand forecasting.



Seasons and is_peak_season

"season" enables us to identify and analyze booking trends and patterns based on seasonal variations. "is_peak_season" is a feature that helps identify peak seasons, facilitating the analysis of reservations based on the season.

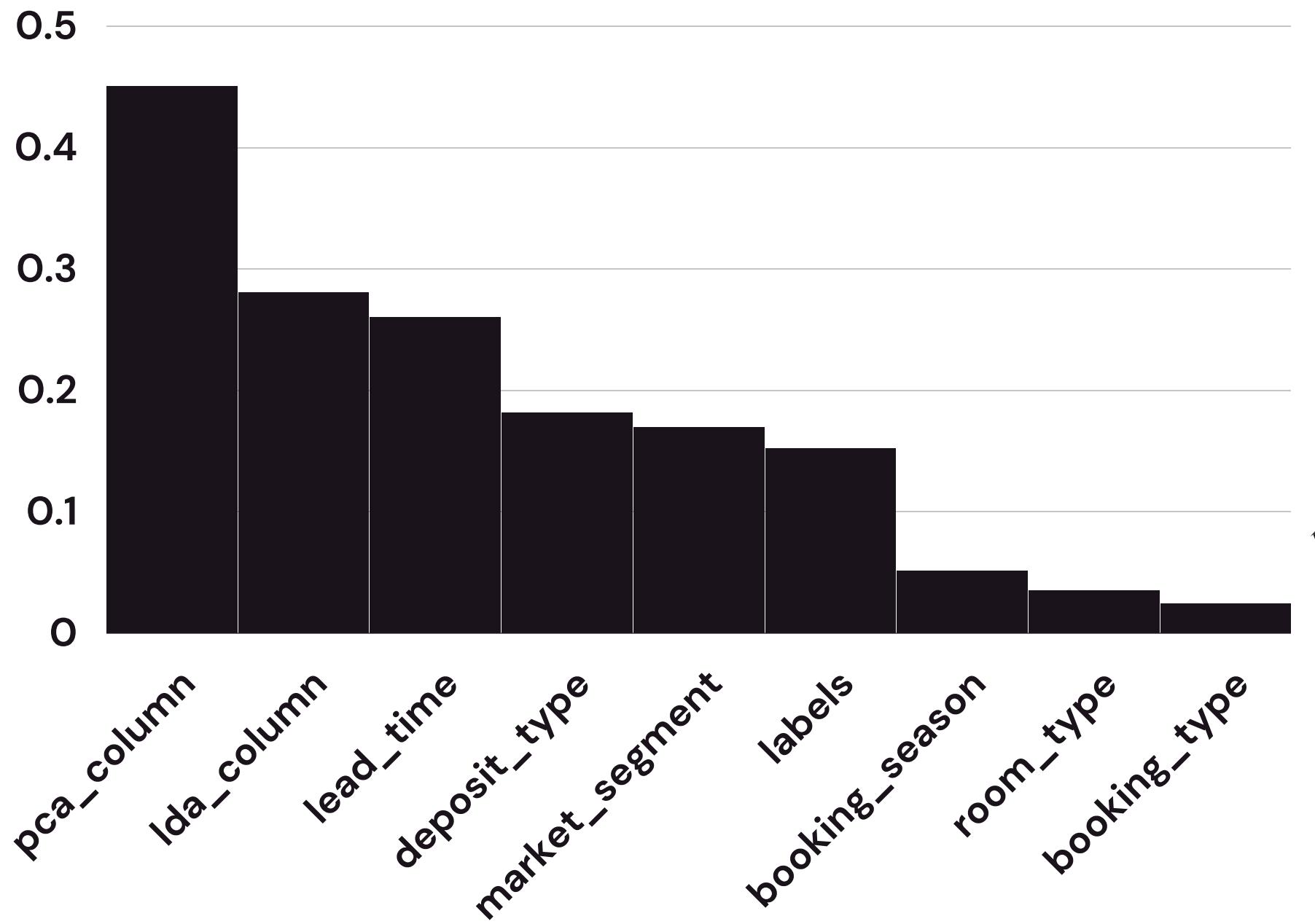


Total cost

"total_cost" signifies the overall cost, providing essential data for budget and profit analysis of reservations.



Feature Importance



Modelling score

Accuracy

95%



Precision

94%



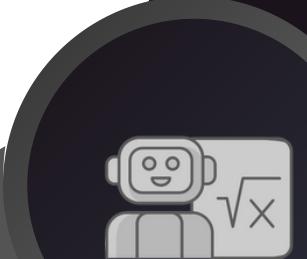
F1

93%



Recall

91%



Presentation by **Mahmizar Hasanova**

Thanks
For
Watching