Customer Churn Prediction

Hotel H2

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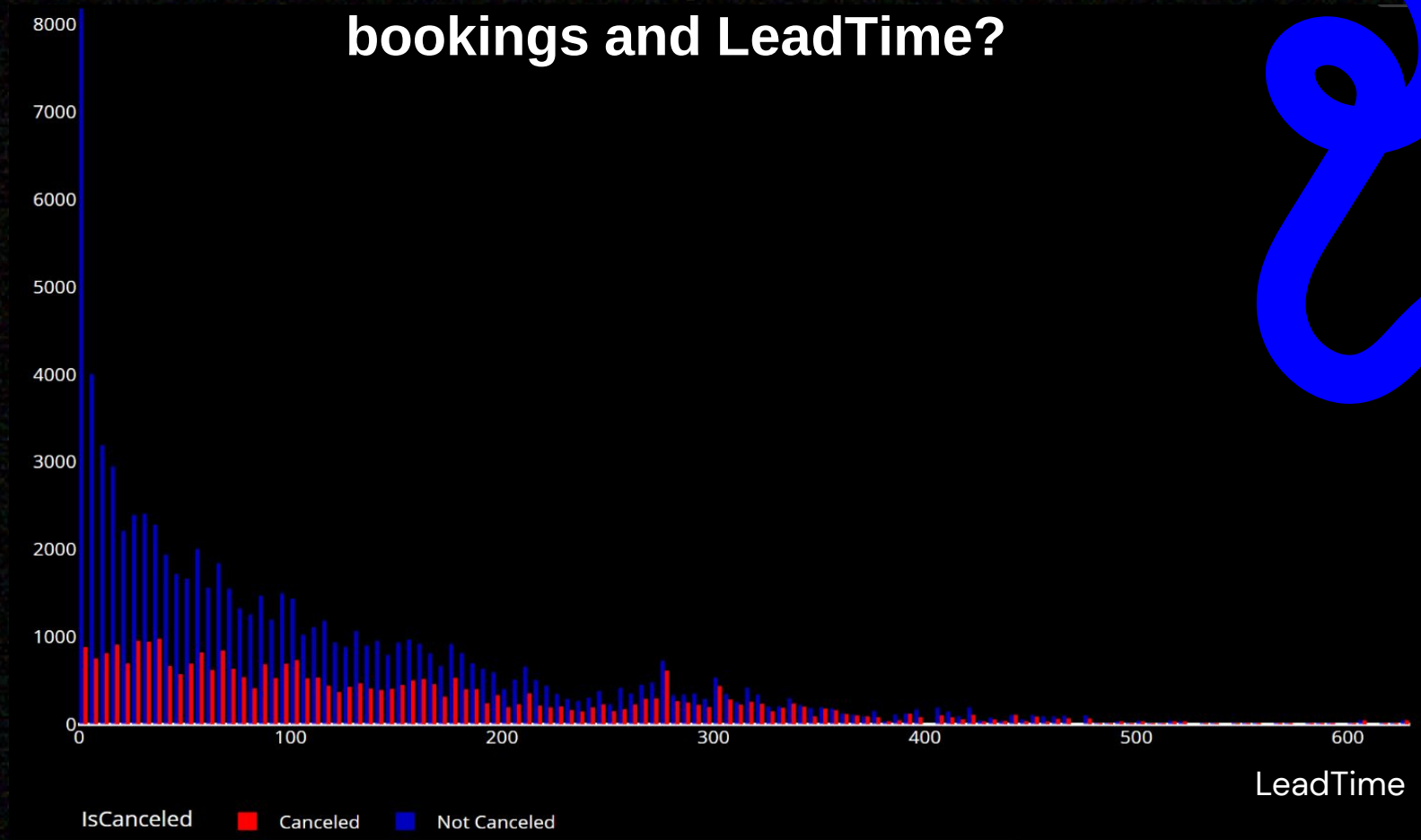
Why predict customer churn?

- Cost-effectiveness
- Customer satisfaction and loyalty
- Impact on revenue and profitability
- Decision-making
- Competitive advantage

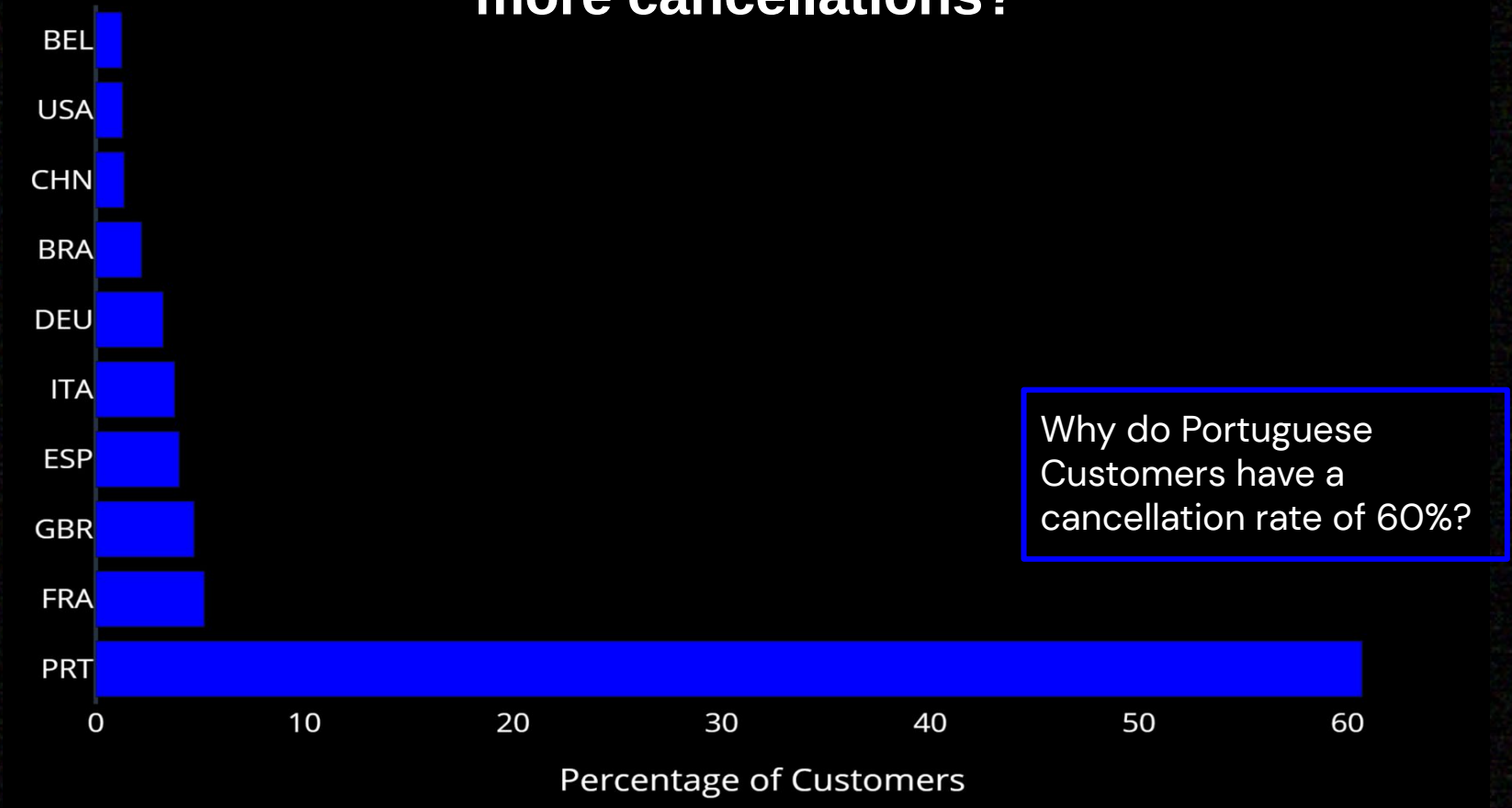
02

Insights

Is there a relationship between canceled bookings and LeadTime?

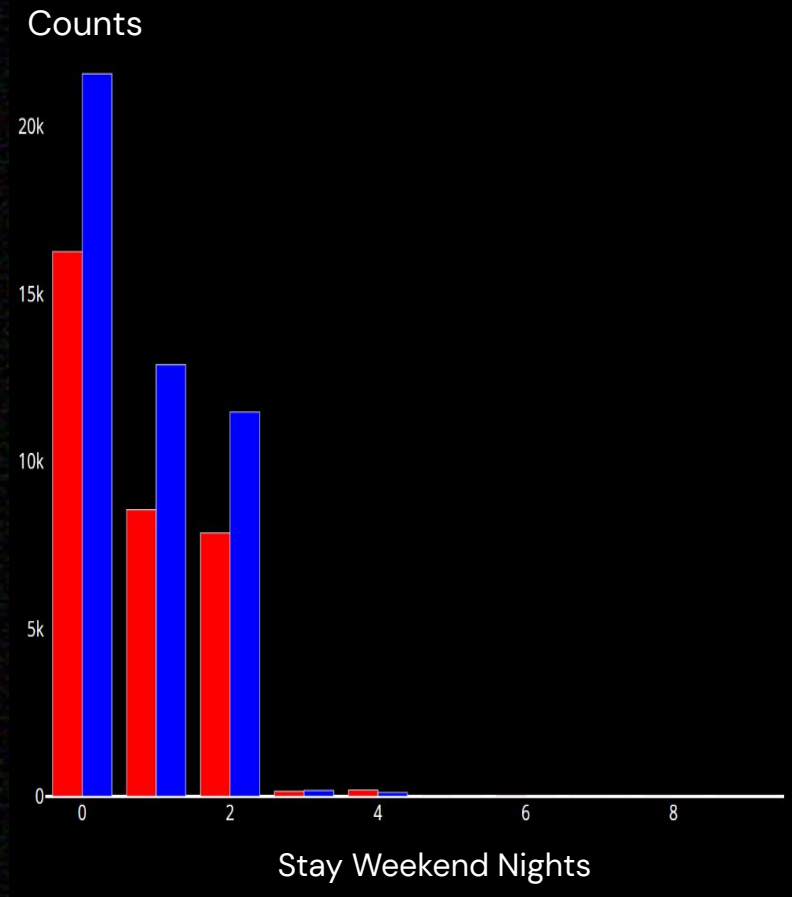


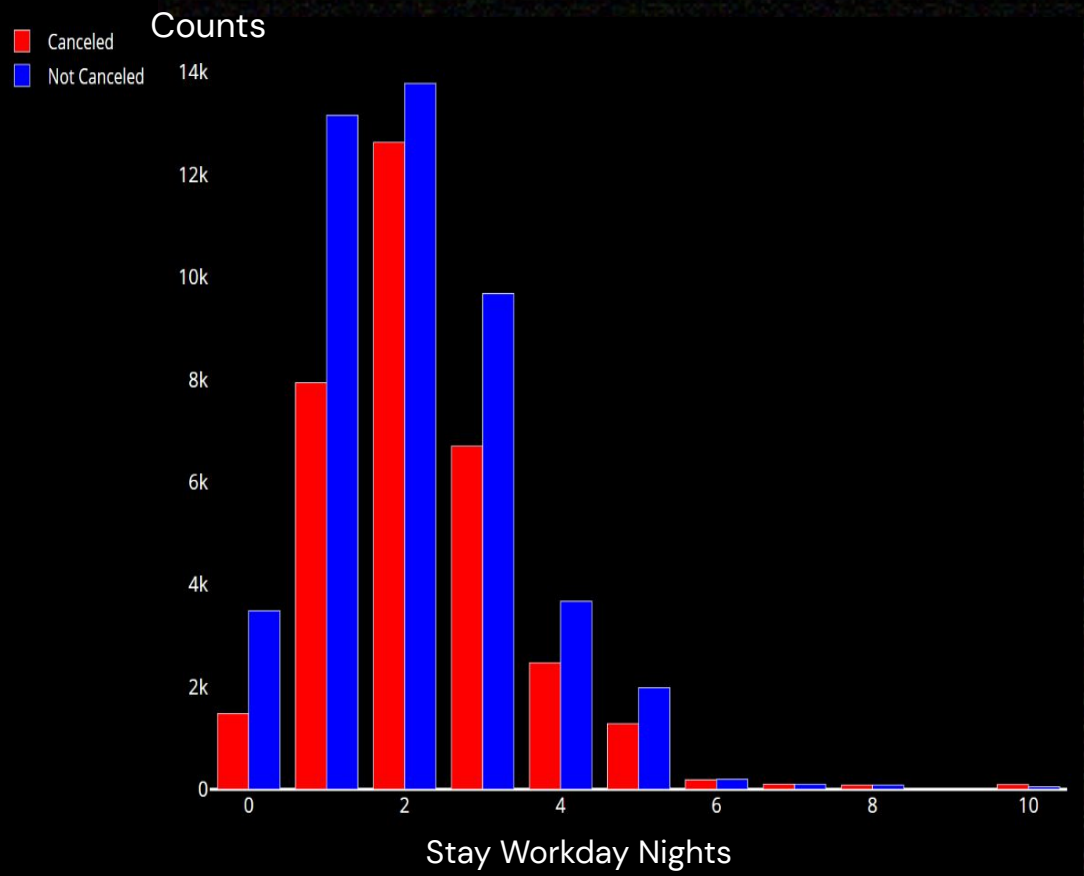
What are the Top 10 Countries that have more cancellations?



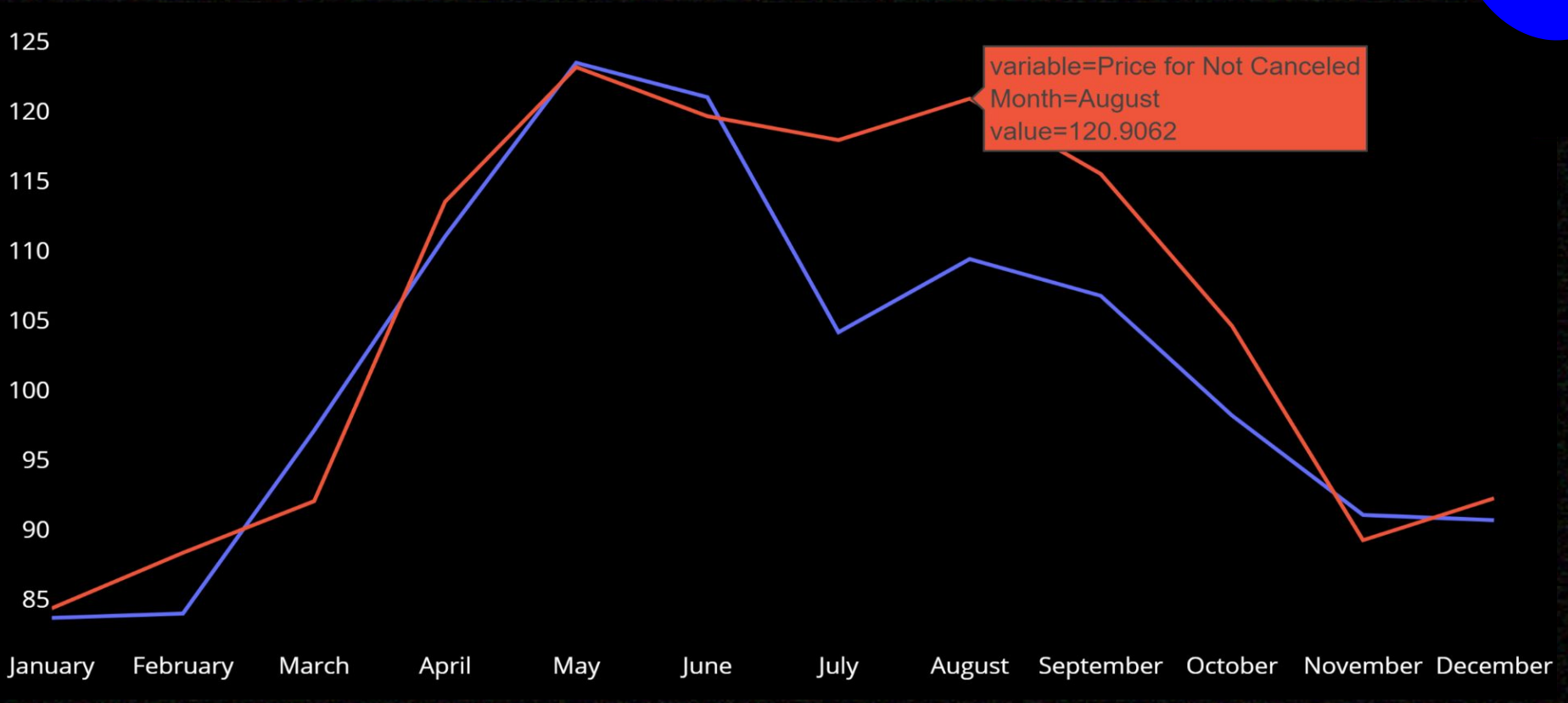
Why do Portuguese Customers have a cancellation rate of 60%?

Is there any difference on cancellations in StaysInWeekendsnights vs. StaysInWeekNights?

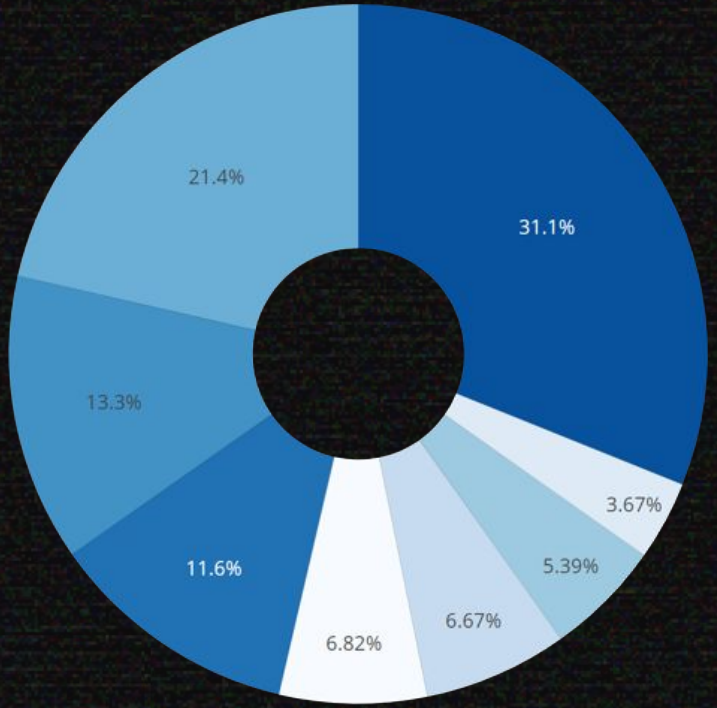




Comparison of Room Prices over the Year: Are Canceled Bookings Cheaper?



What is the average cancellation rate (%) for each market segment?



- **Undefined**
  31.1%
  Mean = 1
- **Groups**
  21,4%
  Mean = 0.69
- **Offline Ta/To**
  13.3%
  Mean = 0.43
- **Corporate**
  6.67%
  Mean = 0.21

03

Modeling

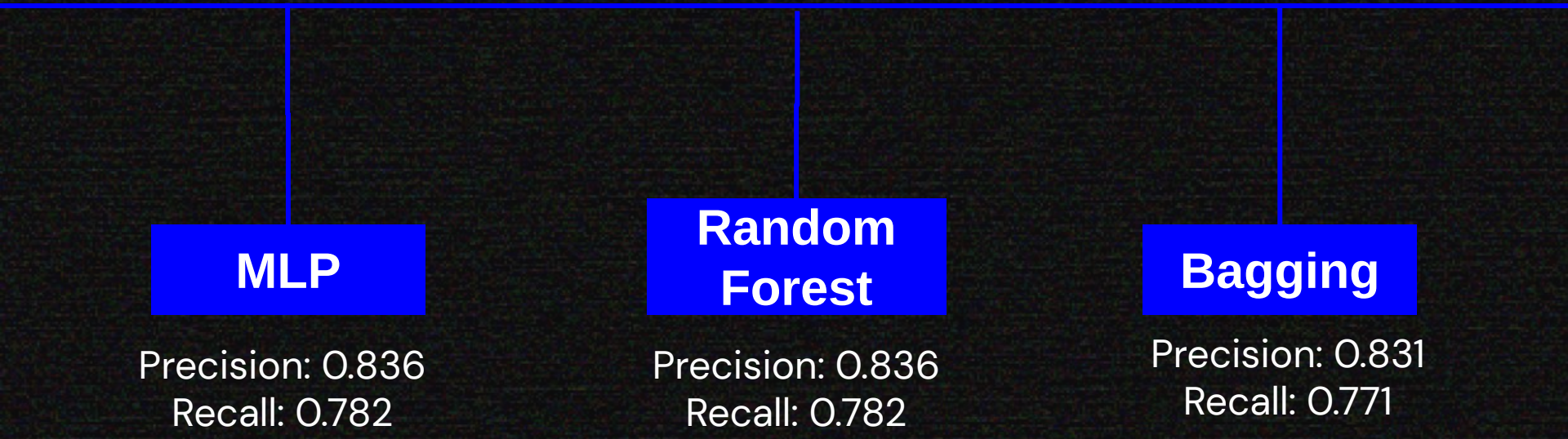
Success Criteria - Strategy Adopted:

>= 70% Recall

>= 80% Precision

Why not F1 Score?

What were the Algorithms with better Precision and Recall?



7,526,872

Overbooking Loss = Precision for Predicted Cancellations* Predicted Cancellations * Average ADR for Predicted Not Cancellations* Average Nights Spent for Predicted Not Cancellations

1,881,718

Opportunity cost for the hotel due to cancellations = Revenue generated by customers who actually checked in - Overbooking loss

How to mitigate predicted cancellations that didn't cancel ?

Establishing channels to resolve overbooking;

Contacting clients to minimize costs and conflicts.

How to mitigate not predicted cancellations that canceled ?

Incentives for early cancellations;

Remind customers of their reservation;

Upselling opportunities and partnerships.

How to mitigate predicted cancellations that canceled ?

Analyze cancellation patterns for targeted marketing

Strengthen partnerships

Collect guest feedback

Thanks!

Do you have any questions?

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