

DESIGNED AND IMPLEMENTED A SCALABLE AUTOMATED SOLUTION TO ACCURATELY PREDICT HOTEL STAY



For A Fortune 500 Travel Technology Company

ABOUT THE CLIENT

The client is a Fortune 500 Travel Technology company and has its operations in more than 50 countries.

CHALLENGE

The client needed daily level forecasts of Hotel Stay Nights for its 7 brands and 50 countries for

- Effective tracking of daily business performance
- Accurate prediction of the total stay for the quarter for better financial planning

APPROACH

We solved this problem with a 2-step approach.

- A base forecast model called “Cumulative Booked-to-Stay” approach was designed. This model leverages previous year's booked and total stay pattern to forecast stayed room nights. With this model as base, we smoothed out the daily booking volatility using a cumulative approach and re-distributed for individual days.
- Further we treated the model for holidays and events based on the historical holiday booking pattern.

KEY BENEFITS

- ✓ 180 days forecast for every brand-country combination
- ✓ The forecast results were made reporting-friendly to match client's existing data input format and the output was integrated to their existing system for consumption
- ✓ Real-time tracking of performance with every day forecast
- ✓ Cancellation projection on the booked data to effectively predict no-show and delayed reporting.

RESULTS

- We back-tested the model for two years and achieved an accuracy of 99% for the cumulative 120 days forecast. The accuracy of daily forecast for holidays was over 95%.
- The client now has additional leverage on discussions with brands on projections and expectations for the quarter.