

## Suggestions to improve Expedia's Booking Rate

How good is Expedia in promoting their sales to users? As a travel company, Expedia is driven to improve user's booking rate and spend a lot of resources on advertising both directly to users and on marketing channels. We provide insights to user behavior related to booking and travelling and offer promotion ideas to improve booking rate.

Before performing analysis, we used `date_time`(user search time) and `srch_ci`(user check-in date) to get the time difference in days. We termed this time difference as "urgency" and used it as a variable to represent the urgency of the hotel search, with 0 representing search on the same day of booking. Our entire analysis is performed on the sample data set, `mini_clicks`. To understand what factors are related to booking rate, we first performed a logistic regression analysis and found that `urgency`, `stay_time`, `is_package`, `src_adult_cnt`, and `cnt` are statistically significant with p-value less than 0.001. We decided to focus on two variables of interest, `urgency` and `is_package`.

More users go to Expedia to search for hotels as their check-in dates approach. However, the growth of users who actually booked is slow compared to the total user growth. The percentage of users who book on each day is approximately the same, with slight increase by about 3-5% when urgency is at 0-1 days. People who are interested in high-end hotels(4 and 5 star hotels) are more likely to book with packages compared to families travelling with one or more children. We also performed user analysis by country to find out about users from different countries' travelling habits on Expedia. Most users in the U.S. use Expedia for travelling in the U.S. throughout the year with Mexico being the second most popular country. Top two countries for expedia users in Germany change through the year.

### Actionable Recommendations:

Our analysis exposes potential drawbacks in Expedia's current promotion strategies. While more people come to Expedia when their travel approach, booking percentage shows only slight increases compared to previous days. Package deals are more targeted to business users who prefer 4 or 5 star hotels rather than families travelling with children. Users in the United States mostly use Expedia for travelling in the U.S.. Expedia has the capacity to capture more customers from their user traffic through promotions.

- We suggest Expedia to offer private promotions to users who are checking hotels closer to their travel dates.
- Expedia should offer more family-friendly packages to capture users travelling with children who viewed the packages without actually booking them.
- Based on our analysis of hotel search patterns of users from different countries, we can send users customized recommendation emails each month. For example, recommend hotels in Italy for users from Germany in December and suggest hotels in America for users from the United States throughout the year.
- Expedia should make an effort to promote foreign hotel offers to their users in the U.S, so users would also use Expedia for more international travels.