

Airplane ticket prices

The background is a solid teal color. On the right side, there are several decorative elements: a large, semi-transparent pie chart with three segments, and several smaller, semi-transparent pie charts of varying sizes scattered around it. In the bottom right corner, there is a stylized bar chart with four vertical bars of increasing height from left to right.

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What drives flight ticket prices, and is there a “best time” to book a plane ticket?

Motivations

- Flight costs represent a significant share of the costs associated with a trip
- We have experienced the fluctuation of the cost of a flight from one day to the next
- Finding the best deal is extremely important for students

Factors/Difficulties

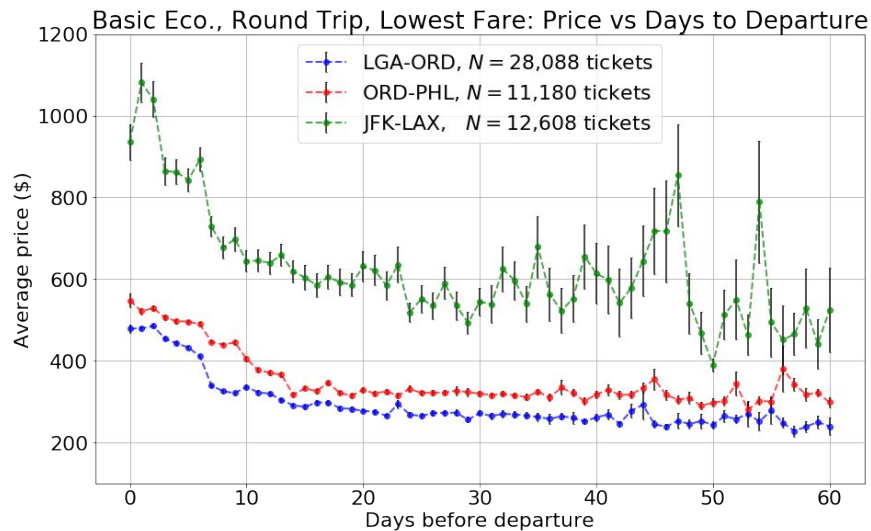
- Dates of travel
- The origin and destination airports
- The airline flown
- The occurrence of certain events at the destination

Hypothesis

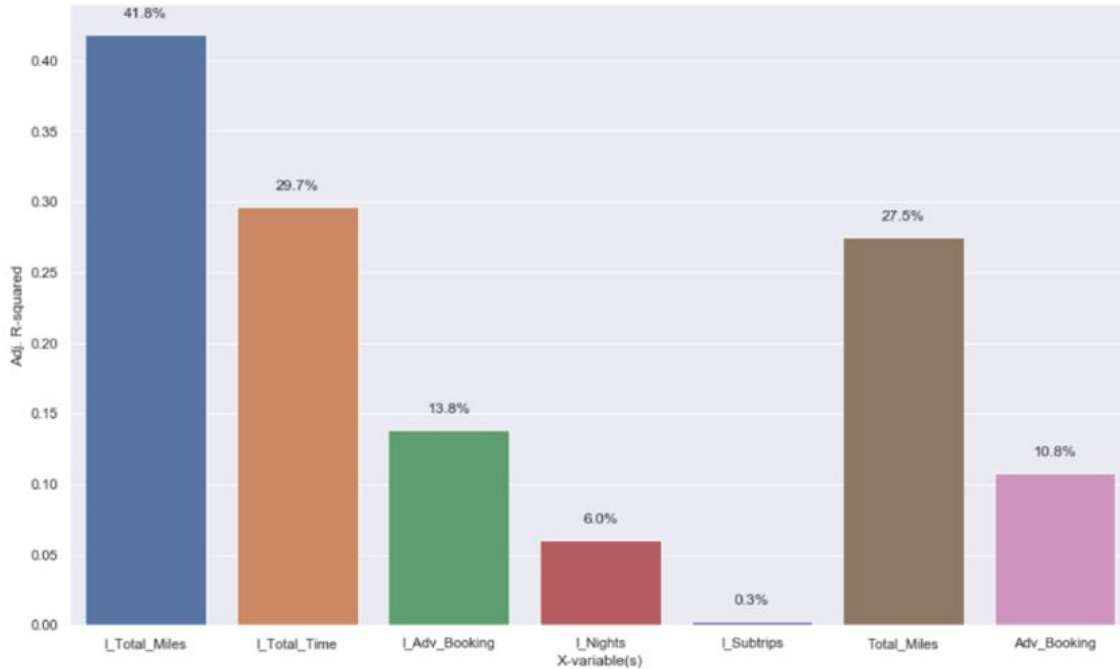
- Null hypothesis: the price increases monotonically as the departure day approaches
- Alternate Hypothesis: the price fluctuates as the departure day approaches



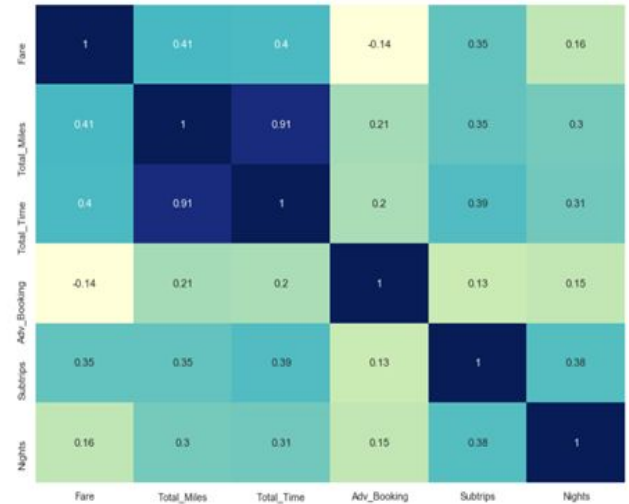
When is the best time to buy a ticket?



What drives flight ticket prices?

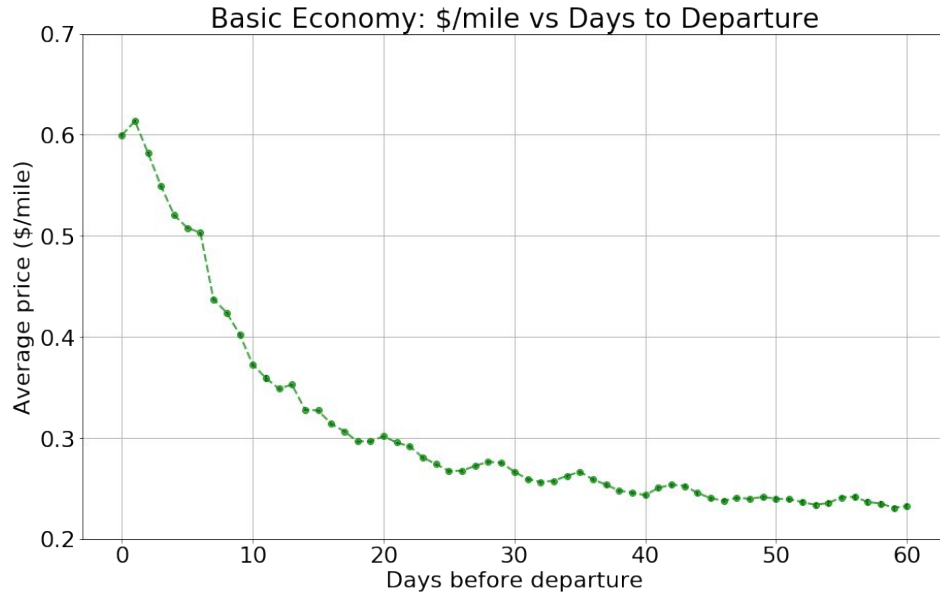


OLS Linear Regression
Adj. R² : 0.25





Conclusions



- The common intuition is correct: one should purchase their ticket as soon as the need to travel is confirmed
- We recommend travelers to confirm the need for travel no later than 7 days (and preferably at least 14 days) before the intended departure in order to avoid large fare increases
- Key predictors of flight prices: distance travelled, duration of flights + connections, advance booking, number of flights/subtrips, and nights (for round trips)