

# How to Choose a Flight Without Delay in LA

Anfeng Yu

September 2018

## 1 Summary

I build the story telling how a citizen of Los Angeles should choose flight to avoid delay. I used only 2008 data set, because this is the most recent data set. Based on data, I found the LAX as original airport is less likely to delay than as departure airport. Meanwhile, I found in December, due to the weather, there will be a hugh increase of flight delay.

Data source : <http://stat-computing.org/dataexpo/2009/the-data.html>

My Tableau profile : <https://public.tableau.com/profile/anfeng.yu#!/>

## 2 Design

Initial version:

[https://public.tableau.com/profile/anfeng.yu#!/vizhome/Flight\\_18/Story1](https://public.tableau.com/profile/anfeng.yu#!/vizhome/Flight_18/Story1)

Firstly, I summarized the cause of flight delay, NAS delay and Carrier delay seems to be most significant causes.

Then, based on the analysis of delay versus date, I found two things.

For week days, in a week the average delay time doesn't change too much, although the Friday's delay time is comparably high and Saturday's delay time is comparably low.

For months, there is a interesting phenomenon, the October and November's delay time is very low, but December's delay time increased rapidly. I inference this is because of Charisma's day's high volume of traveling.

Then, I plot 2 map with airports associated with delay time, origin and departure respectively. By these two maps, coastal cities' airports are easier to have a high average delay time, with east coast cities' higher.

At last, I focused on LAX, because I lived in LA.

In these two maps, I set LAX as original airports and destination airports respectively. And, it is easy to see that, these is few airports would have delay time if set LAX as origin. However, if taking LAX as destination, there would be much more airports have high delay time.

As a conclusion, as a citizen living in LA, taking flight leaving LAX is not so

easy to have a delay time, however, when backing to LA, we should be more careful, and try to avoid flying in December.

Revise According to Feedback:  
Final Version:

<https://public.tableau.com/profile/anfeng.yu#!/vizhome/Flight2.0/Story1>

- 1.Changing the DepDelay in 1st plot to Late Aircraft Delay.
- 2.Build a line graphs plot to find the main cause of increase of December's delay, and found out the weather delay has increased very significantly, which seems to be the result of snow.
- 3.Adding one plot, which is the cause of LAX delay, with respect to months. Besides the weather delay's trend in December, there is a significant increase of secure delay in July. By Google, I found there is a earthquake in July, 2008, southern California. This seems the cause of secure delay in July.

### 3 Feedback

Feedback 1: In the first plot, the DepDelay should not be considered with others, because this is not a cause but a result. We should replace it by Late Aircraft Delay.

Feedback 2:I want to see the main cause of December's increased delay time. And the delay versus time should also use average time rather time sum time.

Feedback 3:I want to see the delay time of LAX versus date.

### 4 Resources

2008 Chino Hills earthquake

[https://en.wikipedia.org/wiki/2008\\_Chino\\_Hills\\_earthquake](https://en.wikipedia.org/wiki/2008_Chino_Hills_earthquake)