Interesting Findings

**Airport Information:**

There are some airports in the USA which are active during certain periods of the year:

To name a few:

Quincy, IL - active only in DEC

Spokane, WA- active Jun-Dec with few flights every month

Cap Girardeau, Mo - active only in Dec

FairBanks, AK- active only in Jun, Jul and Dec

Eagle, Co- active from Dec to Apr

**A day of the week:**

1. Comparatively, there are more landings all days then takeoffs
2. There were continous takeoffs of flights from 6am to 2259am on all days
3. The months that were busy with take offs during the days of the week:

Mon: July

Tues: June

Wed: July

Thrus: June

Fri: July

Sat: July

Sun: July

1. The months that were busy with landings during the days of the week:

Mon: July

Tues: June

Wed: July

Thurs: June

Fri: July

Sat: Dec

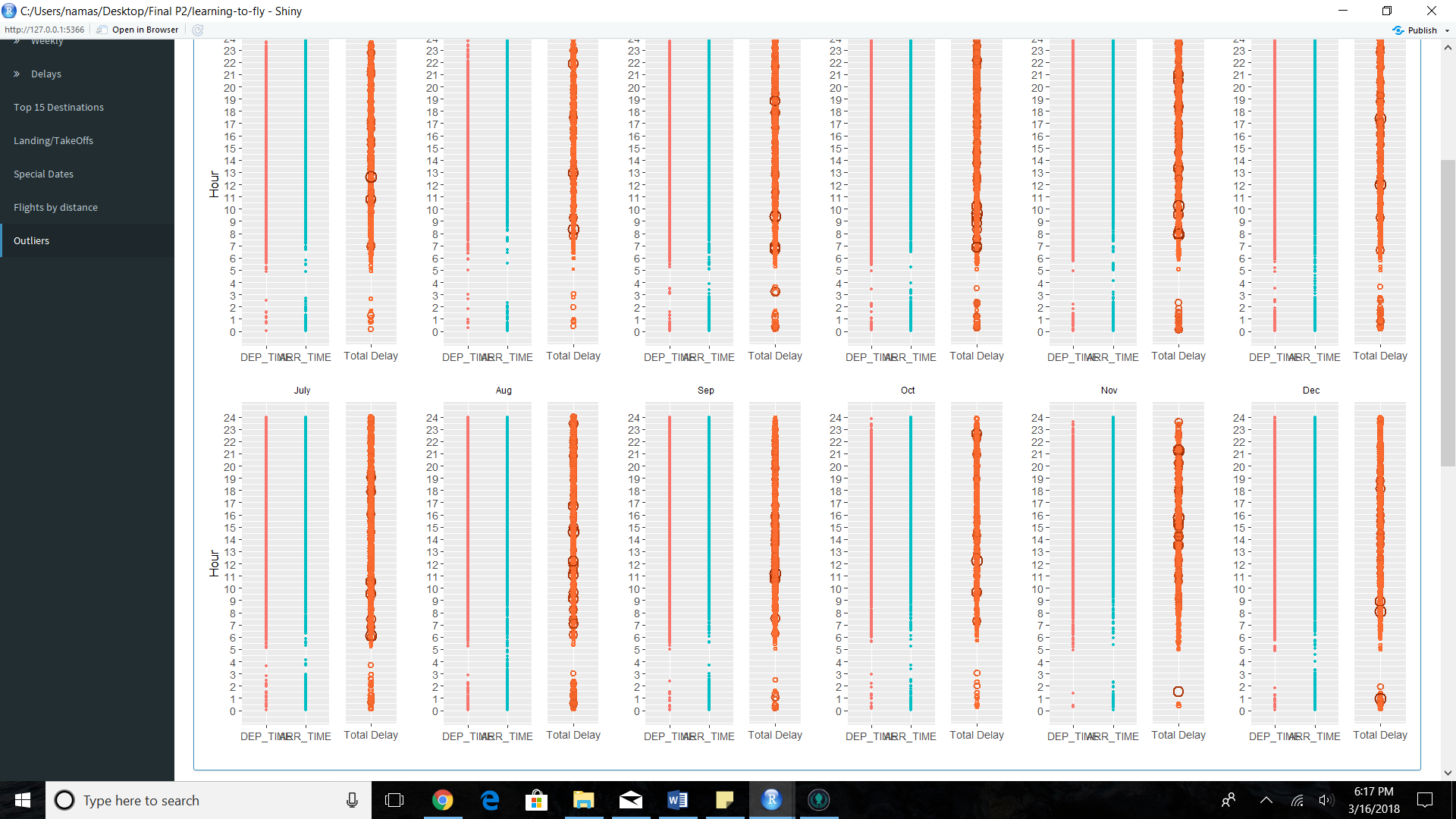
Sun: July

1. The above points conclude that June and July are always the busiest months out of the year and throughout all days of the week.

The is mostly because of the summer vacations in US

1. The plot also shows some usual delays that took place:

Similarly to the one showing below, which was in Nov on one Thrusday



1. Similarly, higher delays:

Mon:July

Tues: Oct

Wed: June

Thurs: Aug

Fri: July

Sat: Oct

Sun: July

**Flight Information:**

Different flights fly during some months whereas other fly throughout the year.

Flight No 1:

Flight No 711:

**A day in the year:**

A lot of people flew on 20th and 21st November as compared to adjacent days, maybe for a reason to celebrate Thanksgiving with their families

**Airline flight:**

Airline UA had the most number of arrivals and departure throughout the year

**Hourly flights:**

Number of departures and arrivals show contrasting trends. In specific intervals, the arrivals are more as compared to arrivals and in the other intervals, visa versa. The intervals for departure and arrival is usually 4 hours.

**Overall Departure 2017:**

**Overall departures and hourly :**

**Arrivals:**

At Chicago O’Hare,Most number of arrivals were from flight no 12953 throughout the year

At Midaway

**Departures:**

Most number of Departures were from flight no 12953 throughout the year

Weekly Flight:

There were similar numbers of arrivals and departure per day during the weeks

Arrival Delays:

Delay Causes:

The highest number of delays were because of Late Aircraft Delays and least because of the Security Delays

Delay Information:

Throughout the year, the following delays usually are in the months :

NAS Delay: June, July and August

Weather Delay: Oct, Nov, Dec

Carrier Delay: Evenly spread throughout the year

Security Delay: Evenly spread throughout the year

Late Aircraft Delay: June, July, Aug

**Top 15 Destination:**

Chicago tops the popular destinations in USA with a huge difference throughout the year.

**Special Dates:**

There was a cancellation of 1 percent flights on the following dates: 2017-03-14, 2017-08-28, 2017-08-29, 2017-03-14

Some of the busiest days are shown in the table below:

**Flights by distance:**

Most of the domestic flights travel 600-700 miles per travel.

Most of the domestic flights travel 110-110 min per travel.

**Monthly Heat Maps:**

# of Flights:

There are more number of flight in the period from July to August. Most of the flights operate from time 0500 to 2200 hrs.

Cancelled Flights:

Most number of Flights were cancelled in March. In May, there were least number of cancellations.

Delayed Flights:

A lot of flights were delayed in the months June, July, August and December between 1700hrs to 2200hrs.

Delayed Time:

Maximum delays times were during the month of Jun with delayed with delay upto 7500 minutes that is 125 hrs

**Weekly Heat Maps:**

# of Flights:

The number of flights throughout the week is evenly distributed except on Saturday where less number of flight flew comparatively.

Cancelled Flights:

Most of the flights that were cancelled were from Monday to Thursday.

Delayed Flights:

Number of Delayed Flights were maximum on Monday and Wednesday.

Delayed Time:

Also, the maximum delayed time was on Mondays and Wednesdays.

Interesting Findings:

1. Contrary to what many think, the greatest number of delays are during the summer months, rather than winter. Instead, one finds a greater number of cancelled flights during the winter. This indicates that winter has such severe weather that forces flights to cancel whereas summer has weather that does not warrant cancelling flights, but only delays them
2. A lot of the flights flew during the weekdays as compared to Saturday being a weekend.
3. Crowds are a great source of dealys than weather, which can be seen that the greatest number of delays and most time consuming delays occur during summer months. The only exception is December, but that is also correlated with traffic caused by holidays.
4. Only 4 airlines(AA,EV,OO,UA) had huge number of flying flights in the year 2017 and the other had reasonable less number of flights in the air.
5. Hourly arrivals and departures monthly plot have a very similar trend throughout the year.
6. The number of arrivals for the airline VX drastically increased throughout the year showing good progress where as airline EV showed a significant amount of decrease in the number of arrivals of its flights till the end of the year.
7. Illinois state tops the number of arrivals with a high margin of 50 percent arrivals out of all the flights which is almost 45 percent more than the next state in the chart, California, which has the 4.3 percent arrivals.