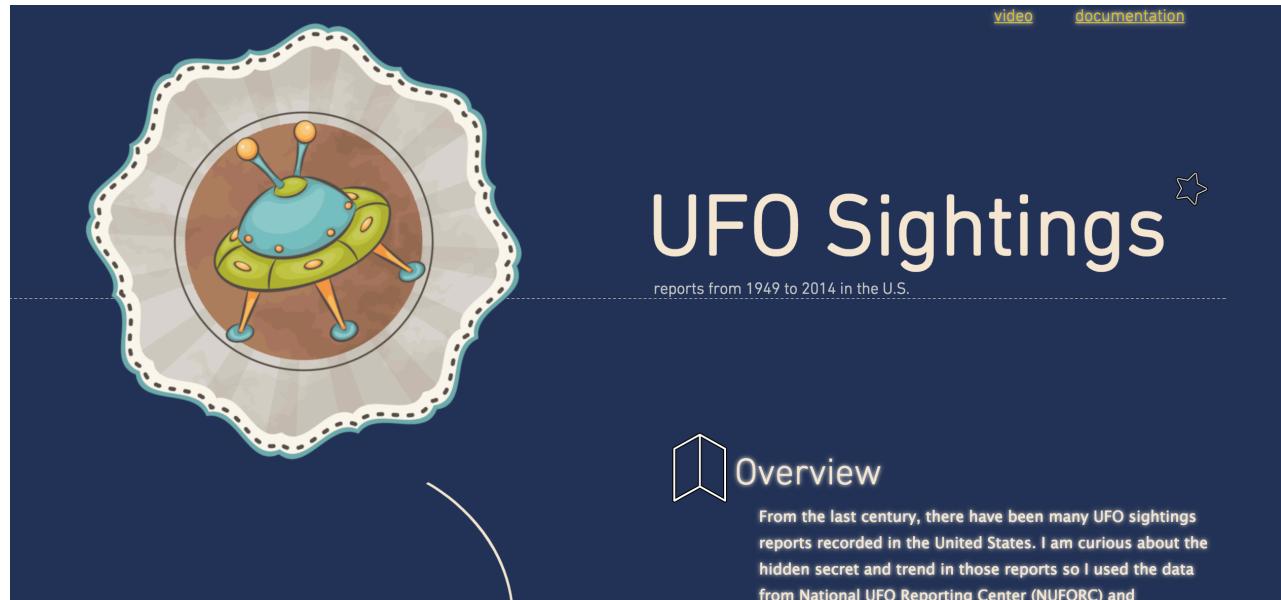


Documentation of UFO sightings

Han Wang



Overview

From the last century, there have been many UFO sightings reports recorded in the United States. I am curious about the hidden secret and trend in those reports so I used the data from National UFO Reporting Center (NUFORC) and the dataset contains over 80,000 reports of UFO sightings over the last century. I extracted the data from Kaggle. The dataset was scraped, geolocated, and time standardized by Sigmund Axel.

Research questions

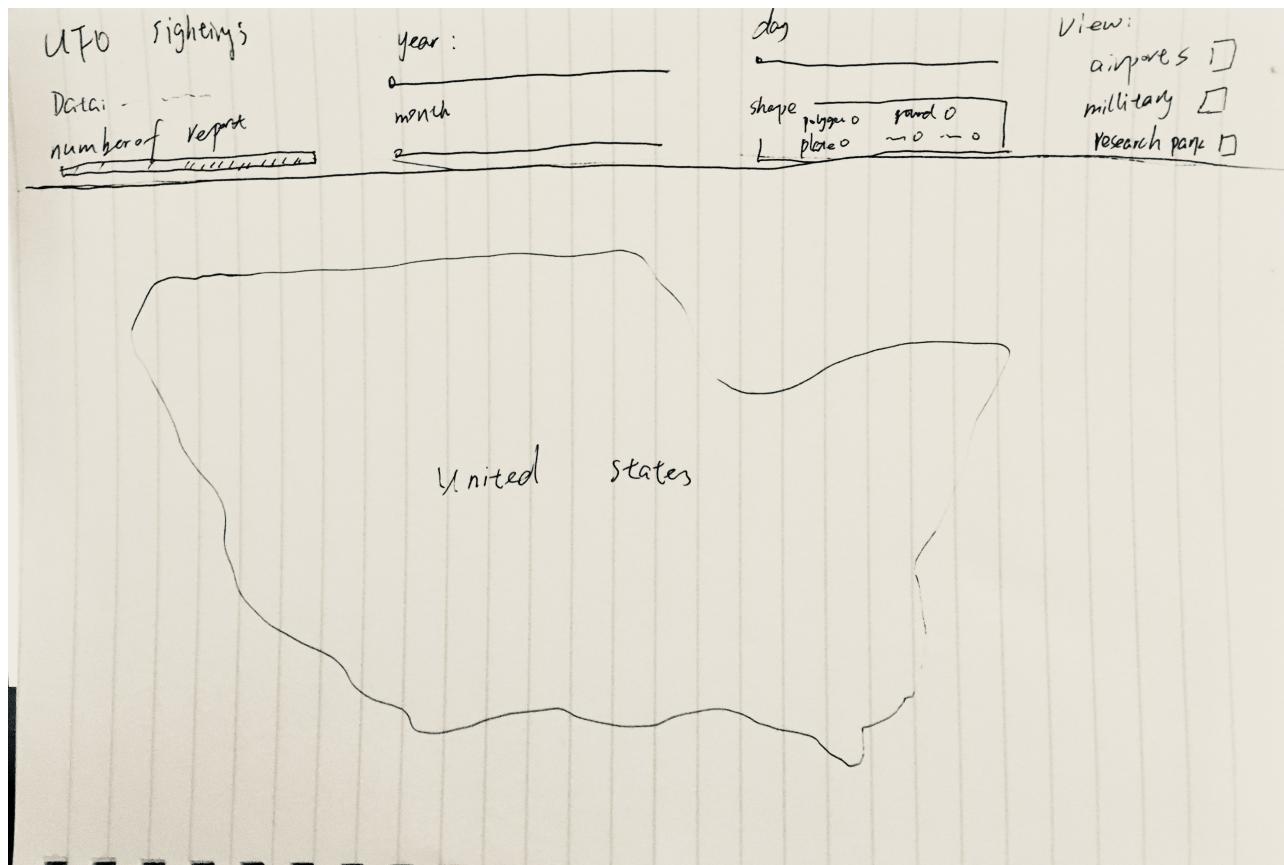
I got a bunch of doubts in my mind initially:

- What areas of the country are most likely to have UFO sightings?
- Are there any trends in UFO sightings over time?

- Do clusters of UFO sightings correlate with landmarks, such as airports or government research centers?
- What are the most common UFO descriptions?

Design process

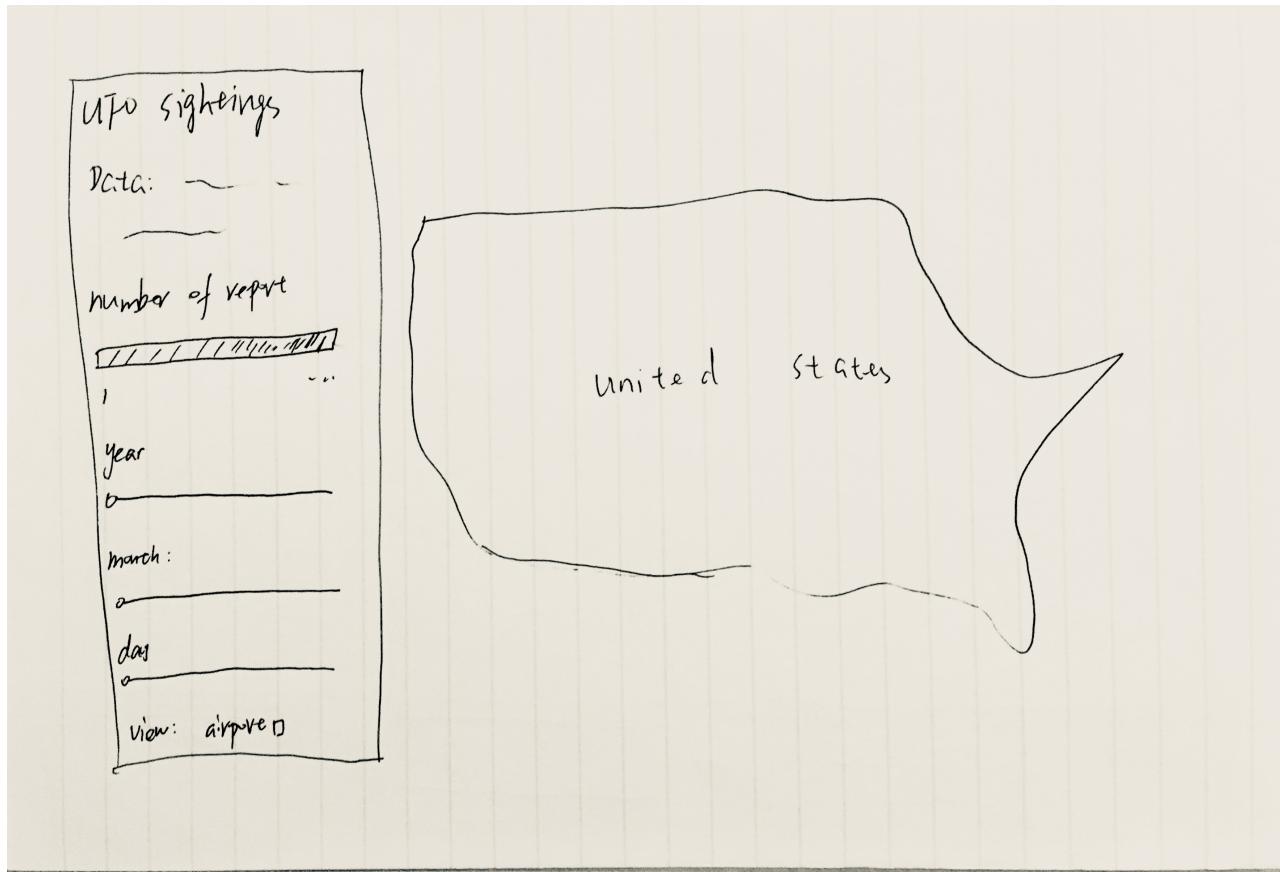
Initially I wanted to create a map for all the visualization, this is how I was imagined at first:



However, as I dig a little bit deeper, I found quite a few problems with this design. First, the shape part is not reasonable since there are majority of shape is reported as “Polygon” and “Round” and very small amount of shapes reported other than “Polygon” and “Round”. So if I choose to visualize other shapes rather than “Polygon” and “Round”, the map would looks like nothing on it. That’s when I realized map is not a good way to present shape difference.

Another thing I notice is initially I wanted to view the locations of airports, military and research centers in the united states and compare those locations with the UFO sightings reports locations. However, I found I must have official permit to have the locations of military and research centers, which is not really possible, so I give up visualize those two. For the airports location, I did not

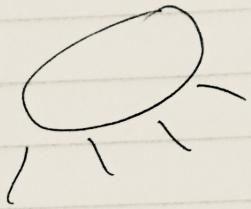
find a dataset of it so I googled the “busiest airports in united states” and I look into the Wikipedia of each of the airports and recorded the latitude and longitude of each airport. So after adjust and delete some part, I made a new design as below:



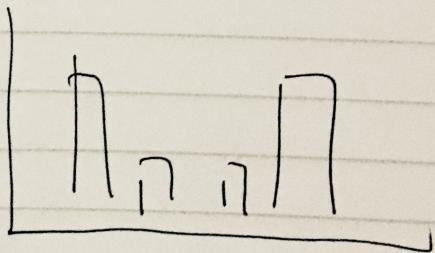
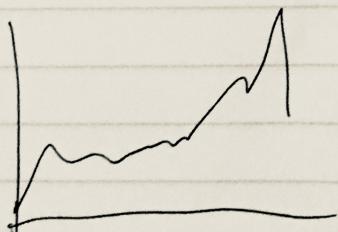
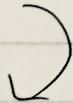
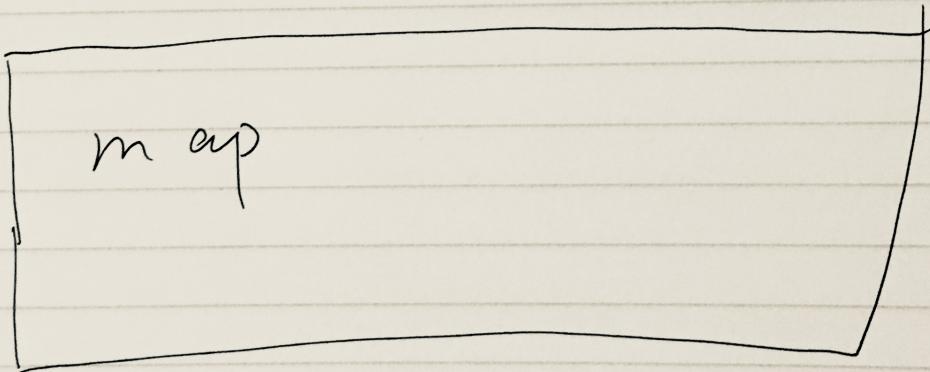
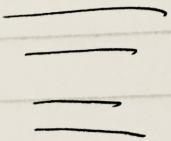
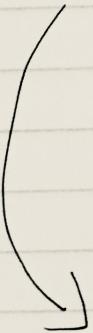
I feel like this is a fresh way to present information. I choose to visualize the change of the reports by different year, month and time in a day. And I choose to only view the locations of airports to see if there are any relationship.

But what about shapes? I guess I could really use other types of visualization as well. Say I could use charts. Then my visualization would have both map and charts. So instead of a map, I am making a mix of different kind of visualization, in this case, I am making an infographic. So a new design comes up:

UFO sightings



overview

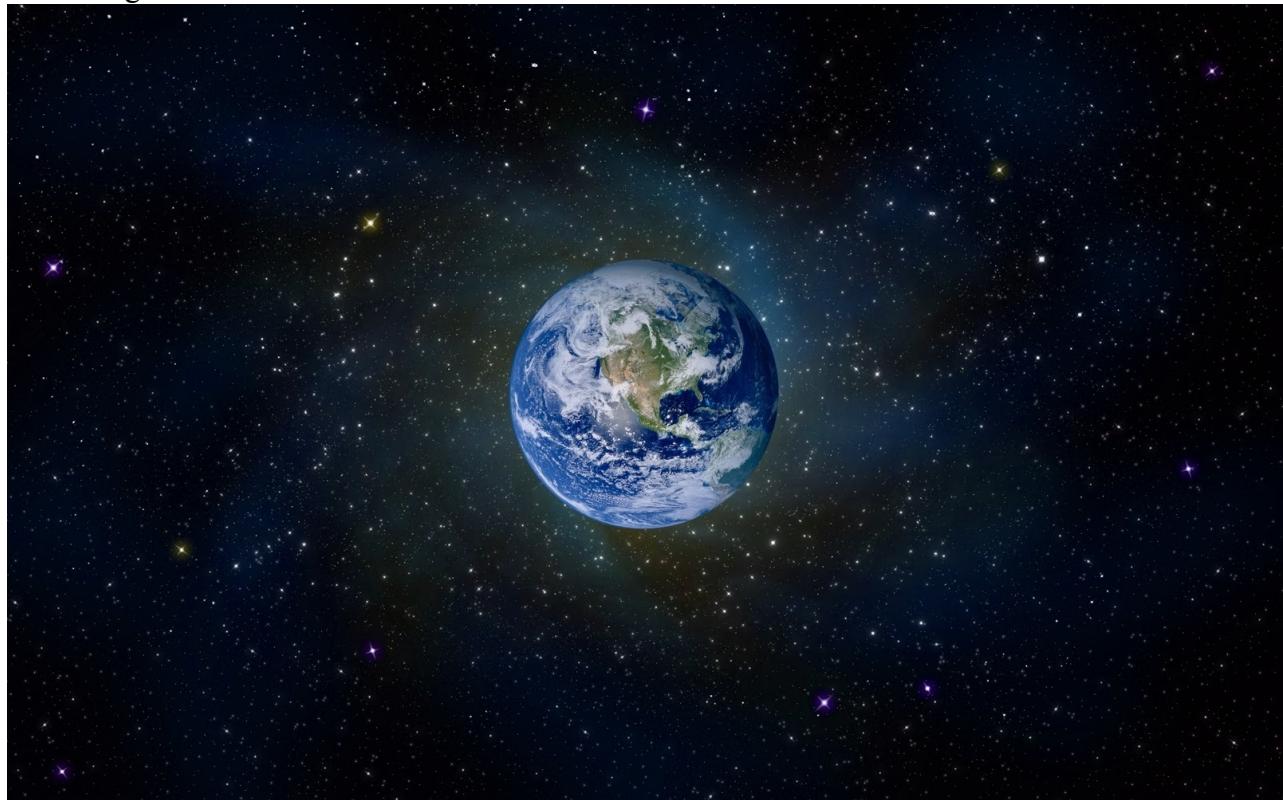


That's basically the final version of my visualization's frame.

For the charts part, other than shapes, I also chose to visualize the number of reports distribution by year as well as time in a day. The reason I chose to visualize those two is that I found it is hard to see the general trend from map. And I did not make a chart showing reports number distribution by month since there is not a clear trend there.

Color theme

At first I wanted to create some sort of theme like grand universe, mystery and everything, something like this:



But later I realized this theme seems really good but it is hard to keep every element in my infographic fit this feeling. So I decided to use some color theme which is more cute and easy to find elements fit in that design, something like this:

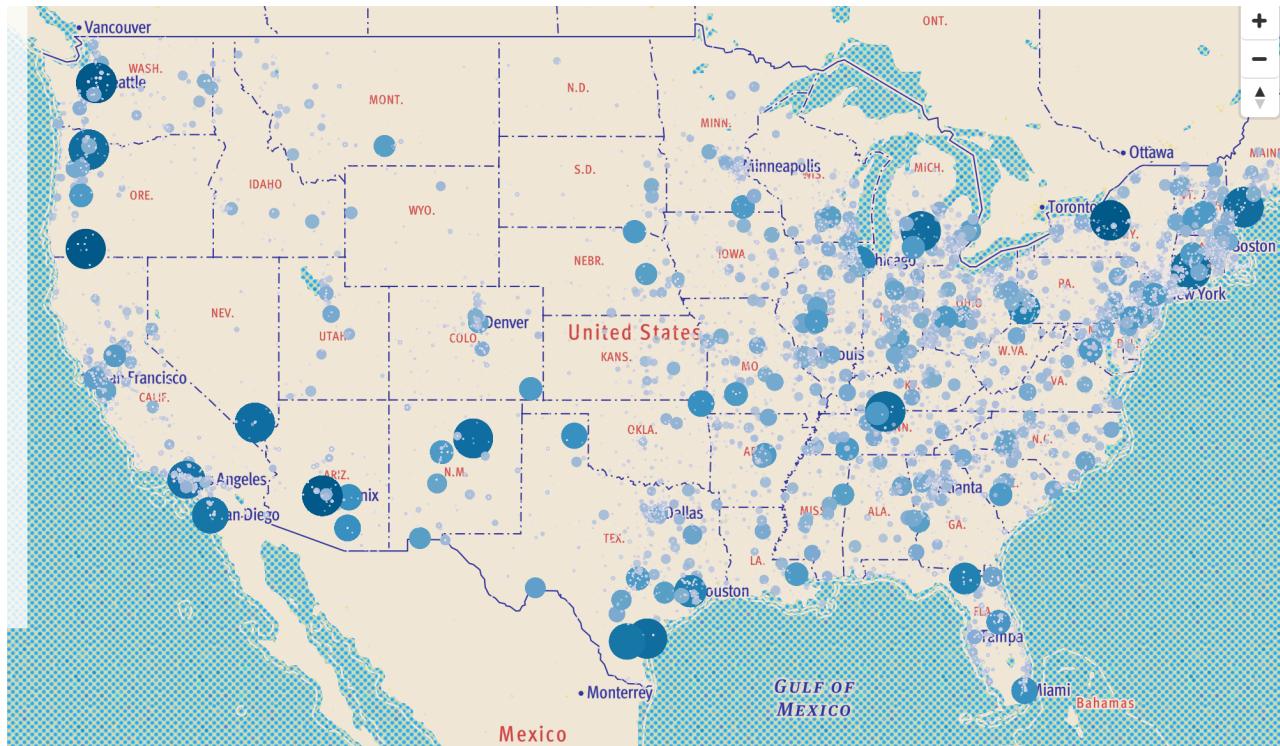


So you could see my infographic is basically made in the color theme I present above. I think it is cute. Hope you will like it as well.

Research results

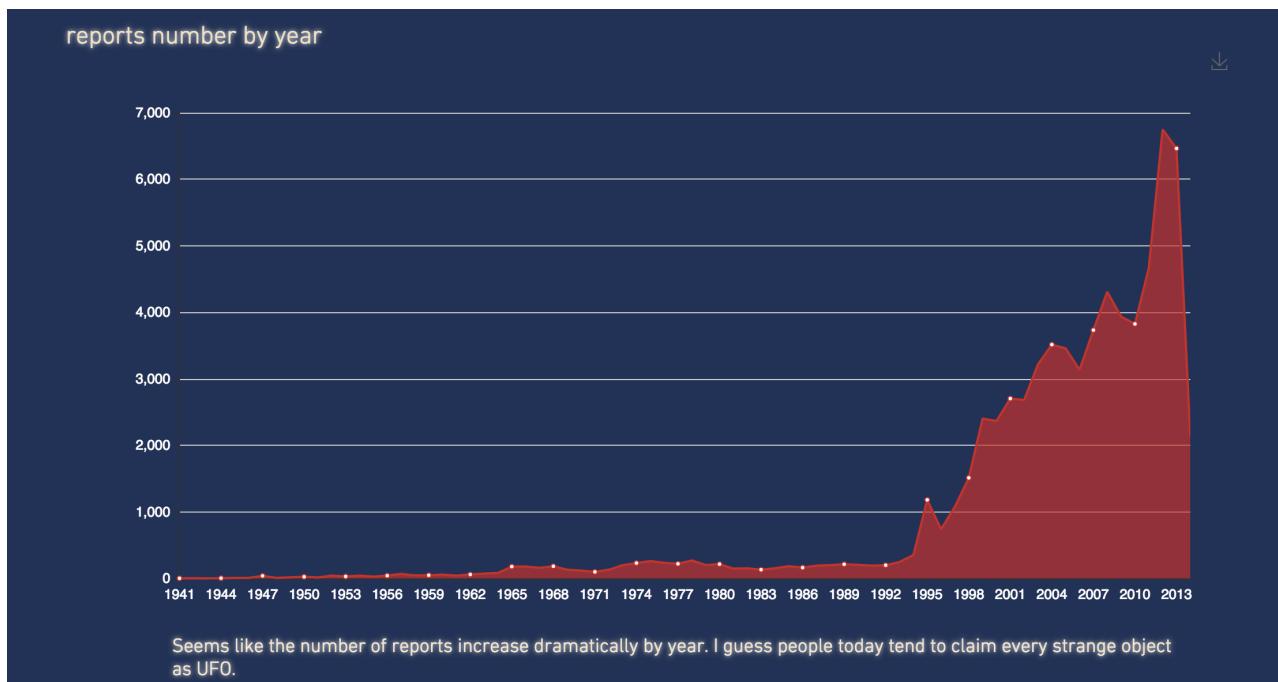
After I visualize the dataset, I could answer the questions I had at very first.

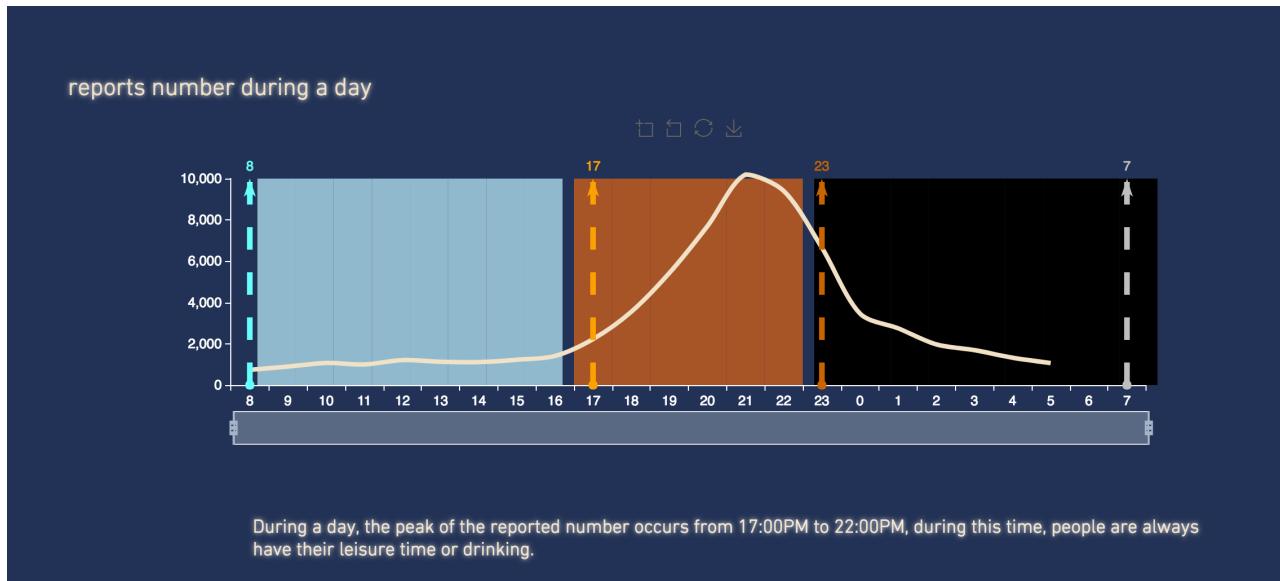
- What areas of the country are most likely to have UFO sightings?



As we could see from the pic, the darker and the bigger the circle is, more reports happened in that area.

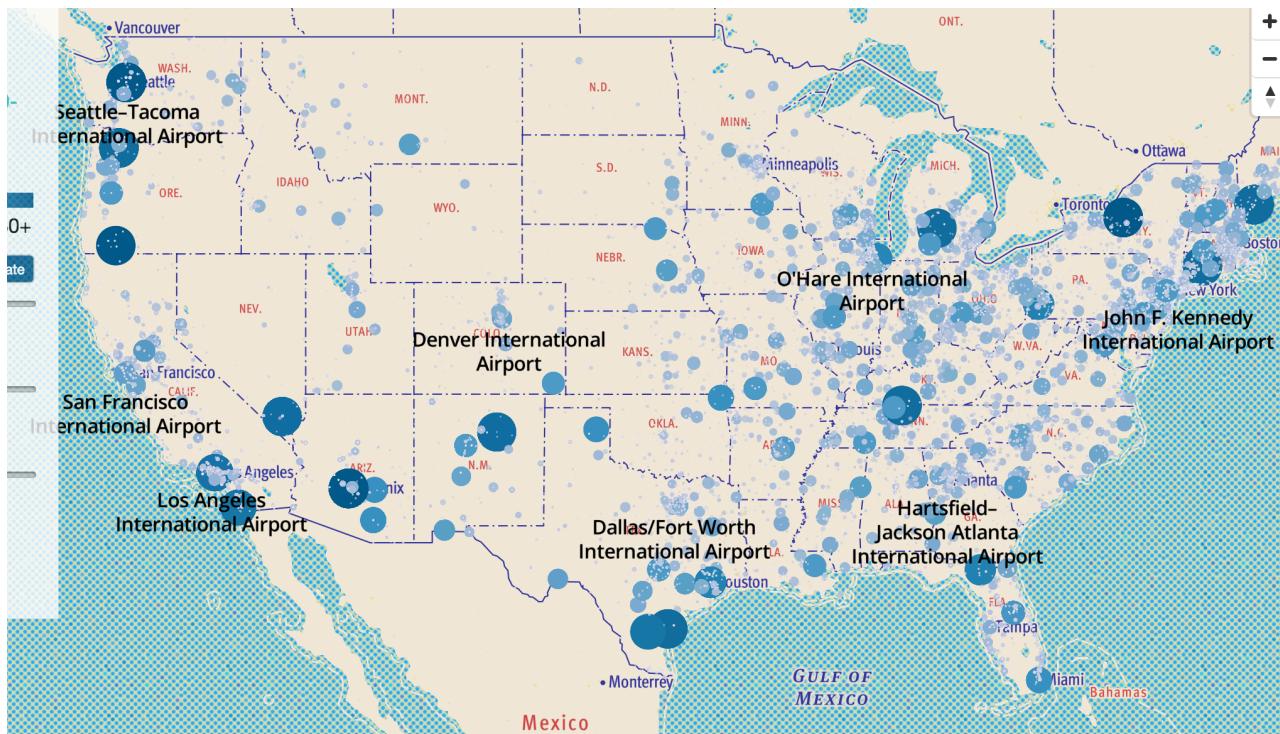
- Are there any trends in UFO sightings over time?





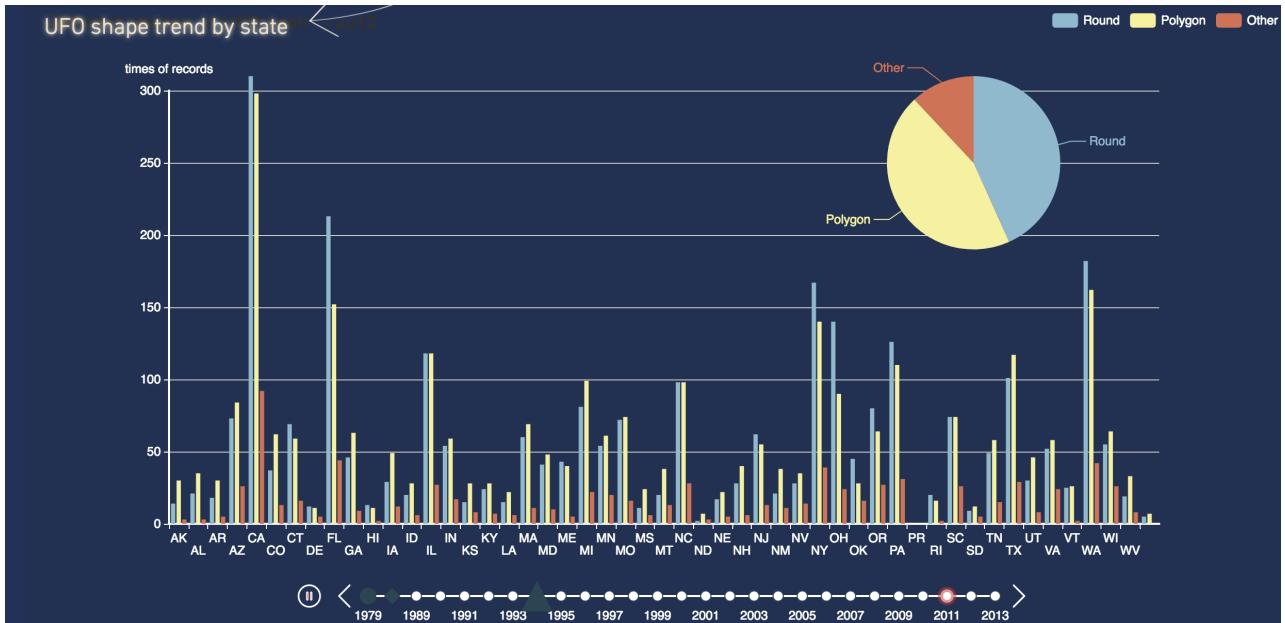
As we could see from the two charts above, there is clear trend by year and time of a day. The reports number increase dramatically as year goes by. The majority reports would happen when people are having their leisure time (drinking).

- Do clusters of UFO sightings correlate with landmarks, such as airports or government research centers?



Yes.

- What are the most common UFO descriptions?



Definitely “Polygon”.