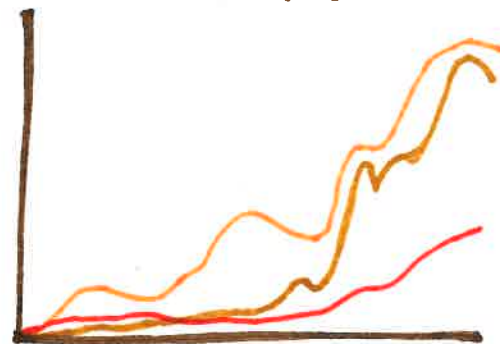




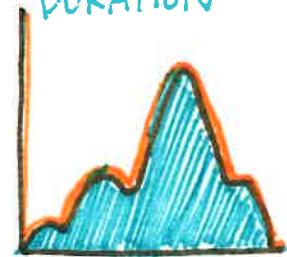
UFO REPORTS BY YEAR



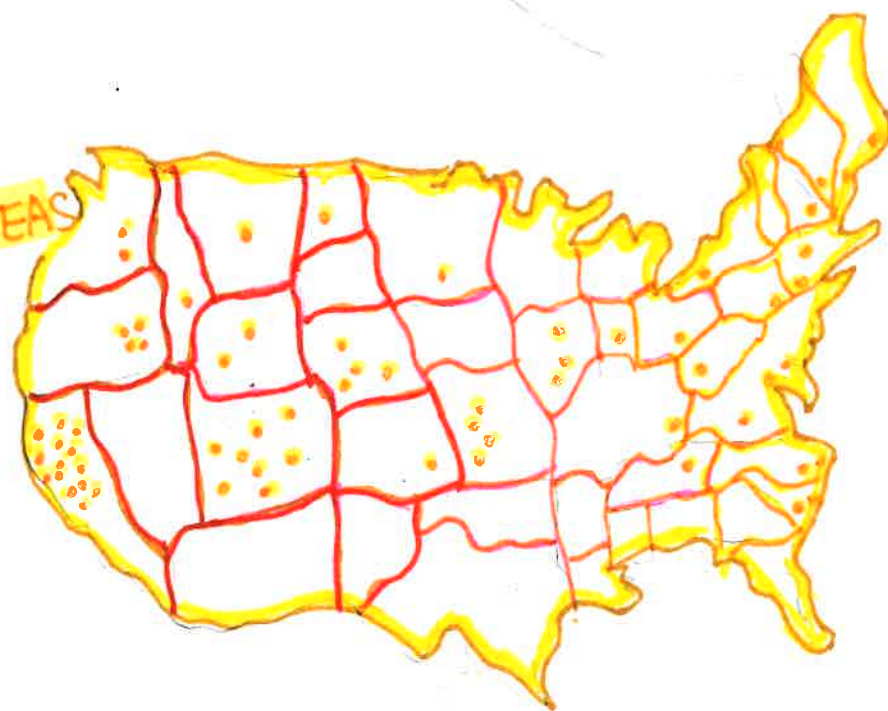
BY SHAPE



DURATION



IDEAS



- What areas of the country are most likely to have UFO sightings?
- Are there any trends in UFO sightings over time? Do they tend to be clustered or seasonal?
- Do clusters of UFO sightings correlate with landmarks, such as airports or government research centers?
- What are most common UFO descriptions?

## LAYOUT ★

color- UFO Reports per (1000 km<sup>2</sup>) 10000 people in U.S.



## FOCUS/ZOOM



SHAPE



DURATION

color: time

shape: shape · size - duration

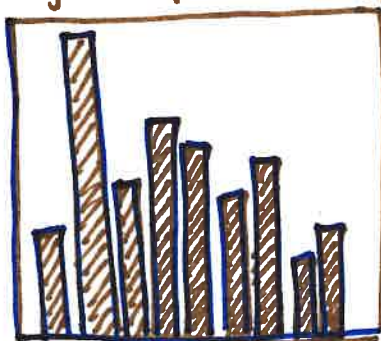
other variables:

- difference between the sighting & the date posted

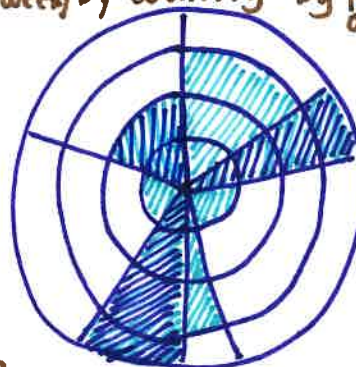
- TITLE UFO sightings in U.S. viewing through geo map

- TASK show the relationship between geo data and quantity of shape/duration, clustering etc. in U.S. map
- allow interaction to further zoom in the details in particular geo areas

by time (year, month, day of week) by country length- by population/area



time



ideas cont.

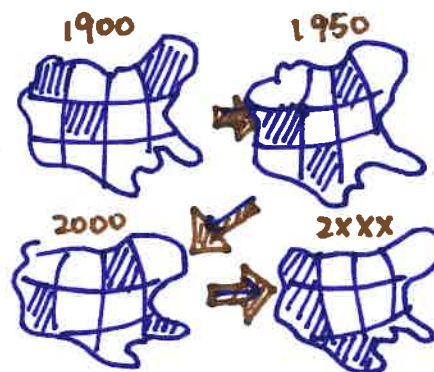
## OPERATION

!# ANIMATION !#

- zoom in/out would display details in that particular region based on shape/position/duration in multiple views
- shape of the data point, sequential color-time...

## DISCUSSION

- how about other data attributes like date posted? (date posted - date discovered?)
- clustering makes the individual point hard to observe
- is time good for color mapping?
- the implementation of the animation? (time lapse, color etc.)



!# ANIMATION !#

A changing map based on time line, individual data points distributed based on time

(can also do shape/duration)

!# Animated from the first year to the last year. !#



## LAYOUT (TEXT)

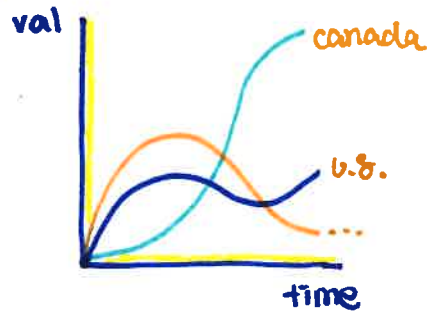
• wordcloud?



size-frequency  
color-?  
on a map?  
corresponds to  
individual data point?  
mouseover-?  
POSITIONING?



## LAYOUT (lineplot)



### OPERATION

- click, expand to its children's lineplot
- shift + click, back to its time plot
- (val would be view in density (/1000km<sup>2</sup>) e.g. or (/100,000 popu-lation)

**TASK** to identify pattern / correlation. between time and another variable. compare & contrast between different region.

## OPERATION

- click on a state may zoom out/in more specific details about that state.
- moving the mouse / cursor may provide additional coloring / highlight of that text

## TASK

- to display descriptions of the reports by its corresponding positions
- to identify possible correlation between geo & text.

## DISCUSSION

- How to choose these word is difficult? frequency? figure of speech etc.
- clustering may make the text hard to visualize
- don't expect any correlation between description and other data attributes.
- how to clean up text data?
- how to position it to reduce clustering?

## DISCUSSION

- how should we assign the color?
- too many children for states in u.s.
- limit the children's leaf level to country?
- frequency, time duration val as y-axis

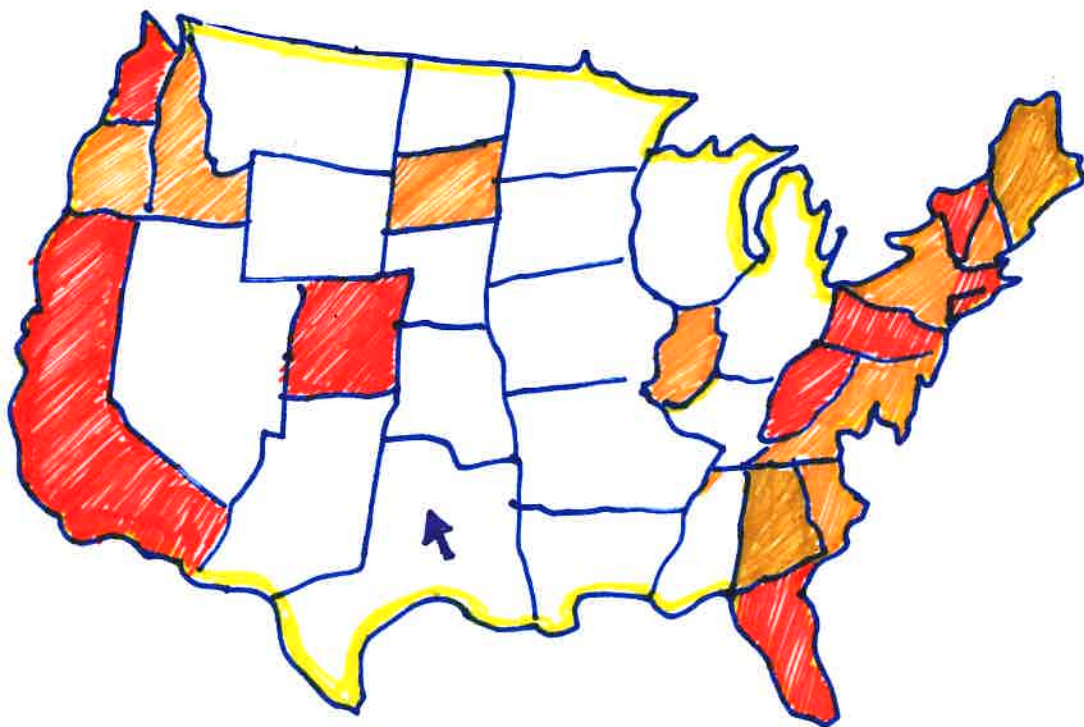
# Final (Basic) Visualization

## OPERATIONS

- click a point (a state) then display the three charts on the right side of the U.S. map
- hover through map would highlight the selection.

## LAYOUT

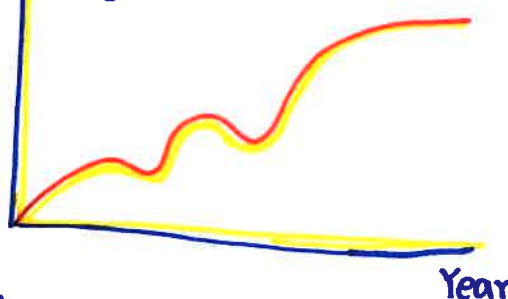
sequential  
the map has color by the quantity of data in a state (/population or area)



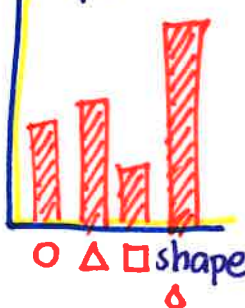
## DETAILS

- the scale of the x-axis of duration subgraph would be log scale since most data's duration is short whereas some are really long
- the map would color based on LAB sequentially
- time scale in the time graph
- aggregate data based on state's population/area

Texas  
time



By  
(shape)



By  
(duration)



## DISCUSSION

- Additional (optional features) / interaction
- zoom (in/out) • animation • display individual data on map
- world map / other countries (Germany, Canada, Great Britain)
- No text analysis • simultaneously click on multiple states

- how to set up the scale of the axes... (duration, log, scale?)
- too many shape categories