Project Plan

A list of milestones breaking the project into smaller chunks and a description of what each person in the group will work on.

- What we've done
    - brainstormed ideas and filtered down to 2 main topics, trends around Burning Man over the years and popularity trends for small bands after performing at music festivals
    - Collect datasets on past Burning Man events, art, camp, theme information, and also tweets made during the event (currently only have tweets from 2015)
        - Events and Tweets by Christina
        - Art and Camp by Jennifer
    - Run our datasets through Tableau to gain initial insights and foundational trends
    - Look at NLP trends with word counts (Christina) and sentiment analysis (Jennifer)
    - Draw up prototype(s) of visualization based on the analysis we want to convey
- To be completed
    - Update prototype based on TA feedback from progress report (5/24)
    - Gather tweet data from 2009 - 2014 (5/24)
    - Compile results of different NLP techniques across the datasets and throughout the years (5/24)
    - Implement interactive visualization in d3, which allows users to choose the technique(s), dataset(s) and year(s) that they are interested in (5/29)
    - Begin poster for presentation (5/30)
    - Complete Poster for presentation (6/2)
    - Get 3 pages of paper (5/27)
    - Complete rest of paper (6/4)
    - Proofread paper and turnin (6/5)

We worked on most of our milestones together besides the ones explicitely labeled by our names and plan to work on the rest of the milestones together as well.

Literature Review

Burning Man

Whether static or interactive, most of the existing Burning Man visualizations display fact-based information, and don't incorporate deeper analysis on the content or outside data related to the event. Our project is similar to existing visualizations and projects in that we also utilize the official Burning Man events and arts datasets, and compare trends across the years. Yet in addition, we also compare the Burning Man data with outside sources (Twitter), and perform NLP analysis in order to extract the underlying theme and cultural trends.

(1) Burning Man Official Site Showcase: a list of open source projects, mostly mobile applications that maps out events and locations at Black Rock City, and allows filtering of events, camps and art listings
Source: http://innovate.burningman.org/
(2) Flint Hahn Burning Man Graphics: a poster that shows how the event changed over the years, on information such as the height of the man, number of participants, ticket price, official theme, moon phase on burn night, the structure of the Temple etc.
Source: https://www.flickr.com/photos/xmasons/4841339241/sizes/o/in/photostream/
(3) Human Activity at Burning Man 2015: a static visualization showing the amount of human activity at each location in Black Rock City during the event in 2015. The activity data is tracked with human.co
Source:
https://www.reddit.com/r/dataisbeautiful/comments/3k4l09/human_activity_at_black_rock_city_burning_man_oc/
(4) Burning Man Timeline: an interactive timeline showing how the event changed over the years for the man's structure and number of participants. Clicking on each year shows more detailed information regarding Burning Man that year, such as themes, photos, interviews, art works etc.
Source: http://burningman.org/timeline/#!/2011

Music Festival

As we look at visualizations for music festivals in general, we found more variety, a lot of which are designed with specific purposes in mind. The Spotify visualization helps to connect people, the Belgium mobile system is designed for safety, and the Uber Fan shows demographic profiles to let marketers, companies or organizations better understand their audiences. Our project is similar as we focus on solving a specific issues or achieving a particular goal as well - namely to surface the underlying cultural trends of Burning Man events over the years, and how outside events influence the festival and vice versa. However, the exact problem we aim to solve is different from the prior works that we have found. In addition, these three examples also gave us inspiration for the different aspects of our dataset that we could look into if time permits, such as how we could connect people with similar interests at the event, or give outsiders better insight into the demographics of Burning Man audiences.

(1) Spotify Visualizes the Entire Planet as a Never-ending Music Festival: an interactive map that shows when two people are listening to the exact same song at the exact same moment all over the world.
Source:
http://www.fastcodesign.com/3034685/spotify-visualizes-the-entire-planet-as-a-neverending-music-festival

(2) International Music Festival, Belgium - a mobile, networked visualization system that help keep festival-goers safe: describes a large scale visualization system deployment for monitoring the music festival, generating real-time views in order to keep participants safe
Source:
https://www.barco.com/en/References/2016-02-08---International-music-festival-Belgium.aspx

(3) The Uber Fan: a static visualization showing the technology, entertainment and social spendings and preferences of a typical “Uber Fan”
Source: http://visual.ly/uber-fan-concerts-festivals

Social Media

We found several visualizations related to social media and more specifically Twitter. The Nokia Internet Pulse for instance visualizes recent Twitter discussion around a particular topic. There were four main ways that this was displayed such as time series of stacked tag clouds, words sized proportionally to frequency, words colored according to the emotional content of the tweet, and clicking on words to show a list of tweets that contained these words. Similarly we wanted to visualize popular and relevant word clouds for every year at Burning Man and to be able to look closer at a specific word. Another paper showed traffic information based on tweets and presented it in map view for mobile applications. The traffic information included time, origin, destination, and conditions. This inspired us to think about whether or not we could use our twitter data for a specific purpose such as creating a visualizing of which locations at Burning Man are most popular. A third paper discussed different ways to map Twitter topic crowds such as with a polarized crowd, tight crowd, brand clusters, community clusters, broadcast network, and support network. This would show the relationships that communities had over different topics on Twitter for instance where a polarized crowd would be between two opposing sides. We thought about how we could display patterns in Twitter conversations about Burning Man and its relation to outside conversation. These papers offer lots of inspiration for displaying words, relationships among crowds on Twitter, and use of real-time updates. One thing that we wanted to focus on however, was the inclusion of multiple types of datasets while these papers only focus on one dataset. In our case, we would include data on events, art, and camps provided from Burning Man and also look at the relationship of Twitter conversation directly related to Burning Man and events happening outside.

(1) Nokia Internet Pulse: A long term deployment and iteration of a Twitter visualization

Source: http://jofish.com/writing/nokia%20internet%20pulse%20chi2012%20case%20study.pdf

(2) Traffic Condition Information Extraction & Visualization from Social Media Twitter for Android Mobile Application

Source: https://www.researchgate.net/publication/221013820_Traffic_Condition_Information_Extraction_Visualization_from_Social_Media_Twitter_for_Android_Mobile_Application

(3) Mapping Twitter Topic Networks: from Polarized Crowds to Community Clusters

Source: http://www.pewinternet.org/2014/02/20/mapping-twitter-topic-networks-from-polarized-crowds-to-community-clusters/