

## Assignment 9: Data visualization

### Group members:

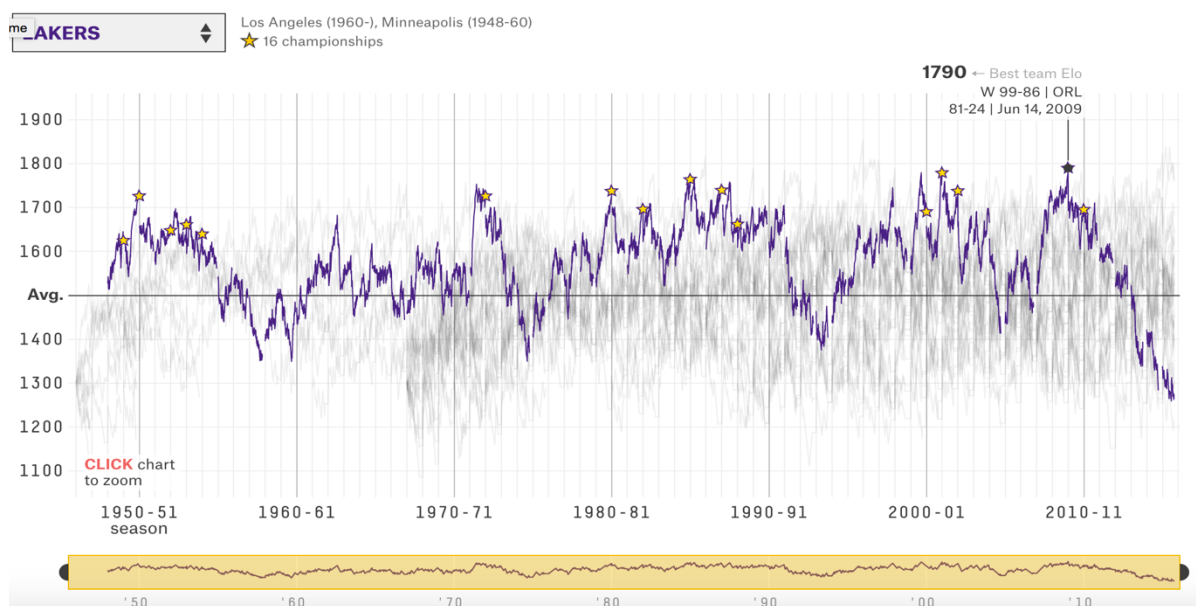
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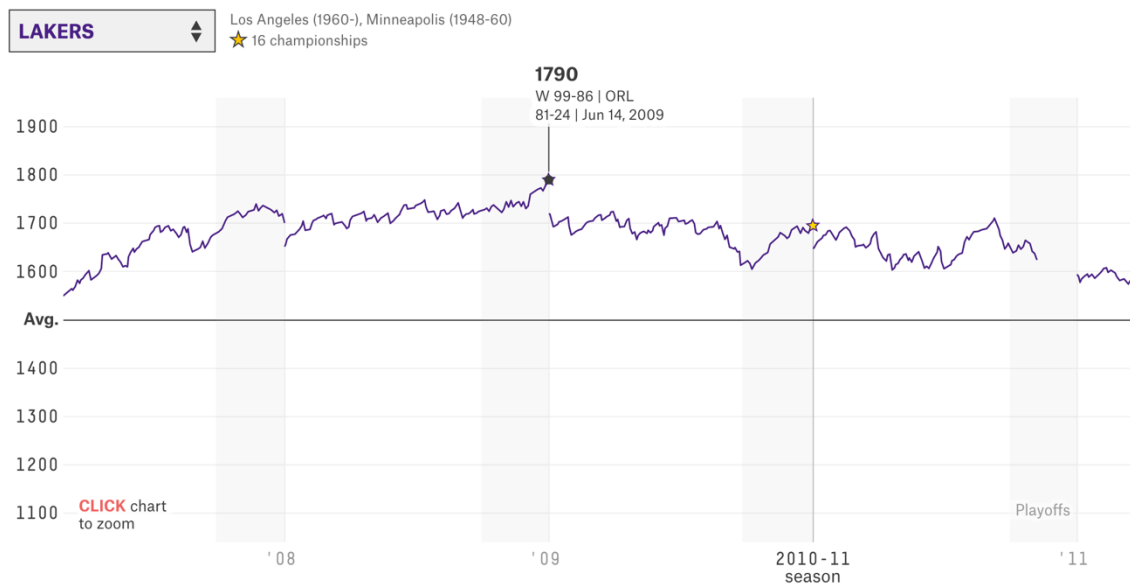
### 1. The complete history of NBA teams

This is an example of graphical visualization in NBA. The following picture shows the overall “Elo rating” of Los Angeles Lakers. The “Elo rating” is a measure of team rating based on game-by-game results, and the only inputs are the final score of each game, and where and when it was played.



In this interactive visualization, we can get all the ratings in Los Angeles Lakers (you can also choose other team) team history. As we can see in the picture, the peak rating of LA is 1790 during 2008-2009 season. In that season the Lakers beat Magic and won the NBA championship. The following picture shows the detailed rating of certain season. We can see the ratings from 2008 to 2011 is above average rating.

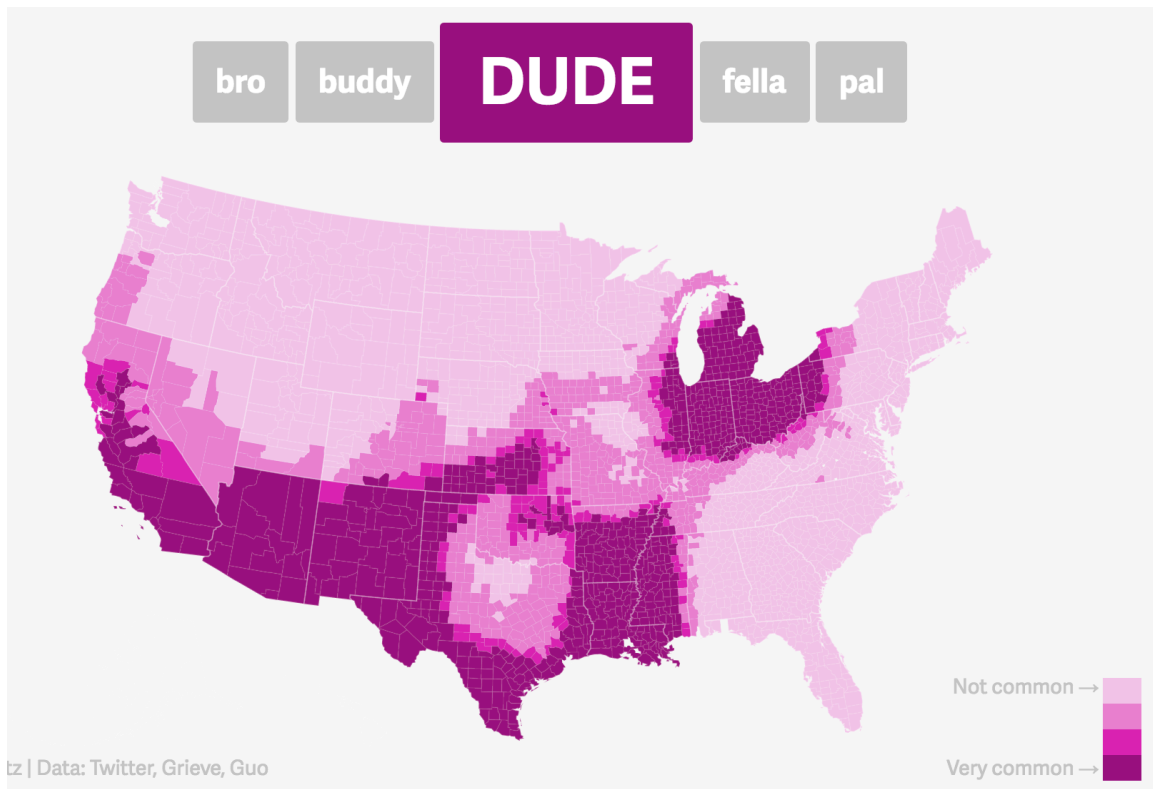
There are some limitations about the visualization. First, it's not a good formula to rate a team only by their scores of games. Other things like teamwork performance, defense efficiency should be take into consideration. Second, it will be great if we can compare two teams' performance during their history at the same time.



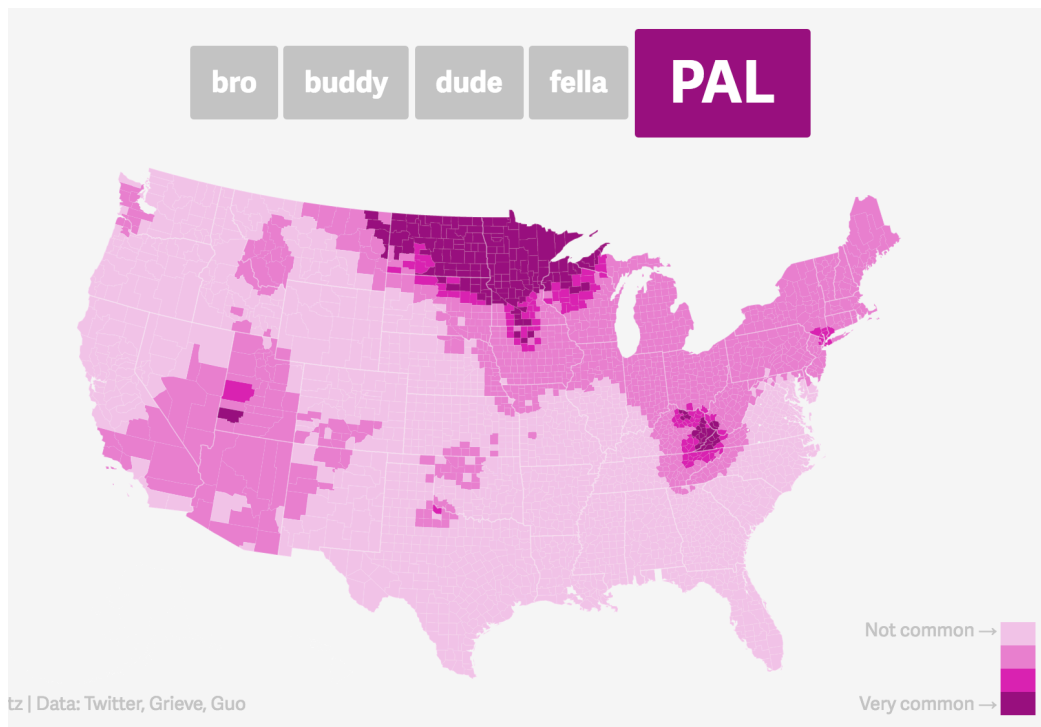
URL:<http://projects.fivethirtyeight.com/complete-history-of-the-nba/#lakers>

## 2. The dude map

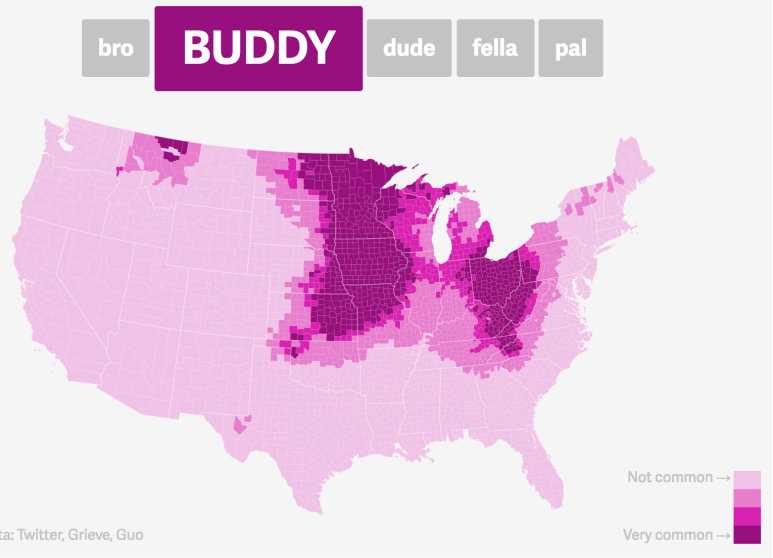
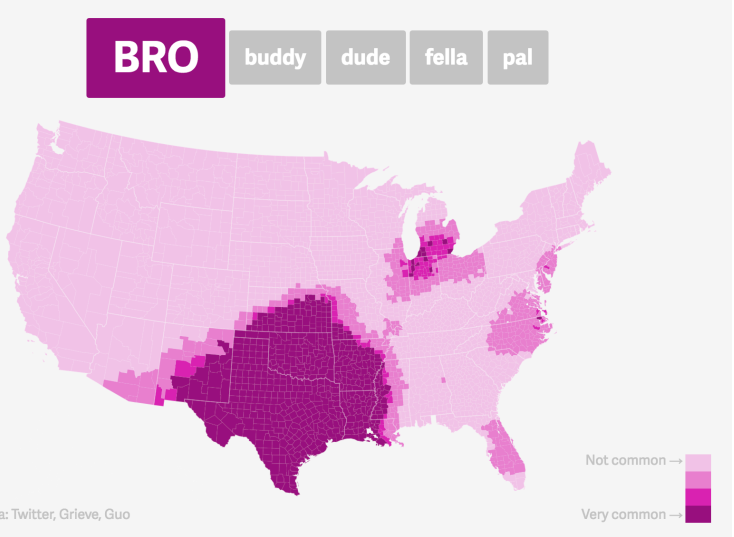
The word “dude” is one of the most popular nouns used by American youth. In other parts of America, people use “bro”, “buddy” and other colloquial vocatives. The following map shows the geographical concentration of few such words.

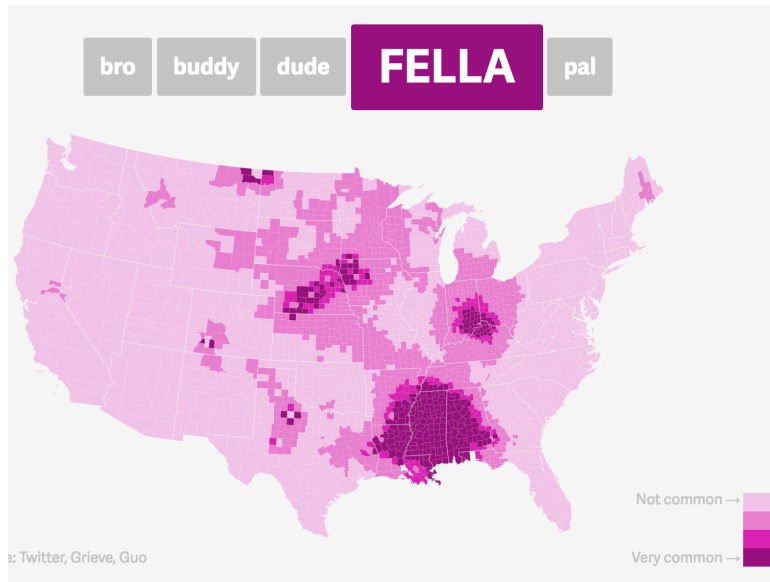


If you click the button “dude” you will find that this word is used in a vary large area of American, especially in the east and in the south. On the other hand, some words are only used in a particular area. For example, the following map shows that the word “pal” is heavily concentrated in the north.



When we click different button of such words, we will get the degrees of different words which are used in different areas. Compare to other words, the word “dude” is the most popular in the country.





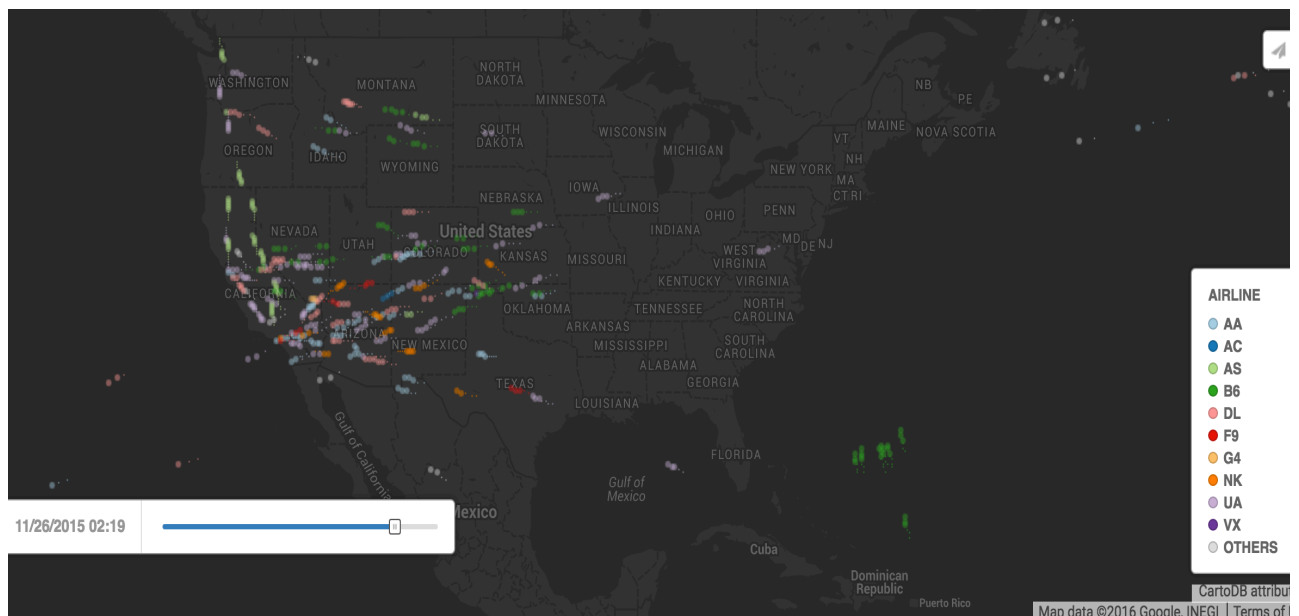
When we want to know which is the most popular word to refer to bros in the Texas, bro or dude? It will be clear if the two words are demonstrated on the map using different colors. The size of color depends on the popularity of words.

[URL:http://qz.com/316906/the-dude-map-how-american-men-refer-to-their-bros/](http://qz.com/316906/the-dude-map-how-american-men-refer-to-their-bros/)

### 3. US Thanksgiving on Google Flights

The next example of graphical visualization is powered by google trends. It shows the flights on Thanksgiving day in America. The visualization starts at 12:10 AM one day before Thanksgiving day and

ends at 7:02 on Thanksgiving day. It plays like a movie as time goes on, indicating different flights moving around the country. In this visualization, we can see the map of American and the time. In addition, we can also see different points with different colors, which indicate different airlines.



URL:

[http://googletrends.github.io/iframe-scaffolder/#/view?urls=Thanksgiving%202015%7Chttps:%252F%252Fgoogledataorg.cartodb.com%252Fu%252Fgoogledata%252Fviz%252Fbf595f4c-7381-11e5-9ec5-42010a14800c%252Fembed\\_map&active=0&sharing=1&autoplay=0&loop=1&layout=narrative&theme=red&title=A%20day%20in%20](http://googletrends.github.io/iframe-scaffolder/#/view?urls=Thanksgiving%202015%7Chttps:%252F%252Fgoogledataorg.cartodb.com%252Fu%252Fgoogledata%252Fviz%252Fbf595f4c-7381-11e5-9ec5-42010a14800c%252Fembed_map&active=0&sharing=1&autoplay=0&loop=1&layout=narrative&theme=red&title=A%20day%20in%20)

[the%20life:%20US%20Thanksgiving%20on%20Google%20Flights&description=The%20day%20before%20Thanksgiving%202015%20shown%20in%20US%20domestic%20and%20international%20air%20travel%20booked%20with%20Google%20Flights](#)