CSE591 Assignment5
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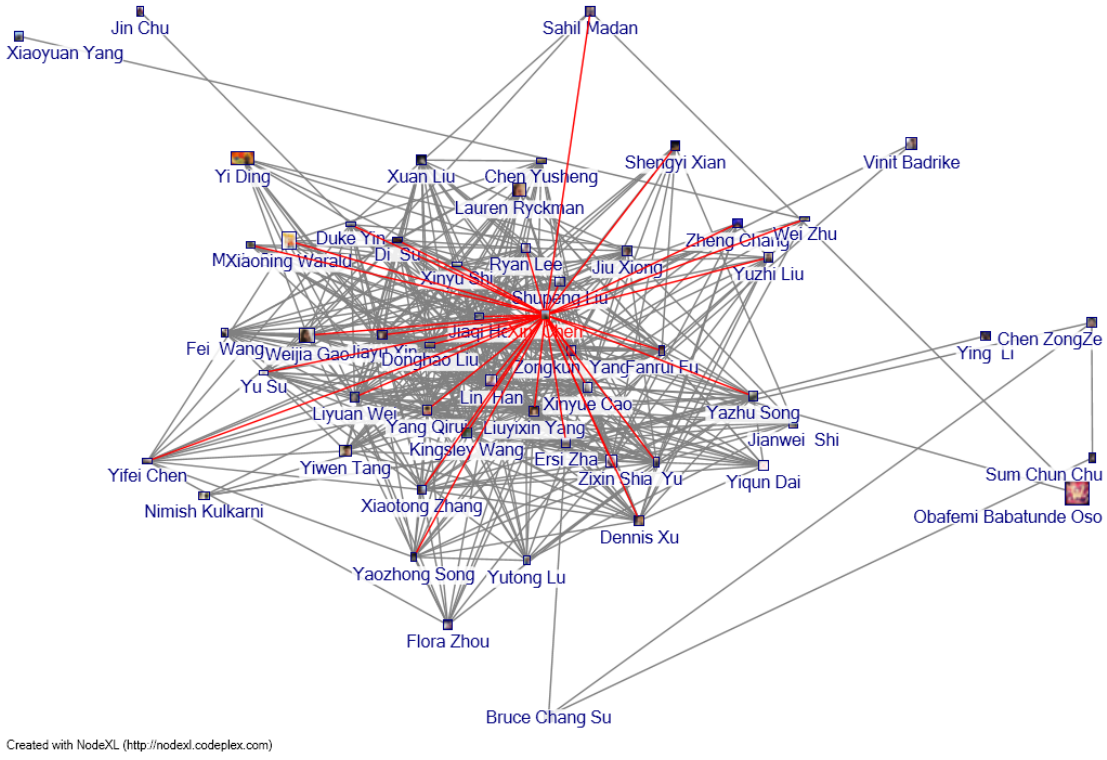
In this assignment, we will create a network and explore the network to find three characteristics. My idea is to use NodeXL to import dataset from facebook and create a network graph of my facebook account. NodeXL will analyze the posts in facebook timeline and create a user-user network based on friend relationship. The reason why I decided to explore the network of my facebook account is that my facebook friends have very strong relationships. I am very looking forward to see how they related to the others.

Three interesting characteristics of my network:

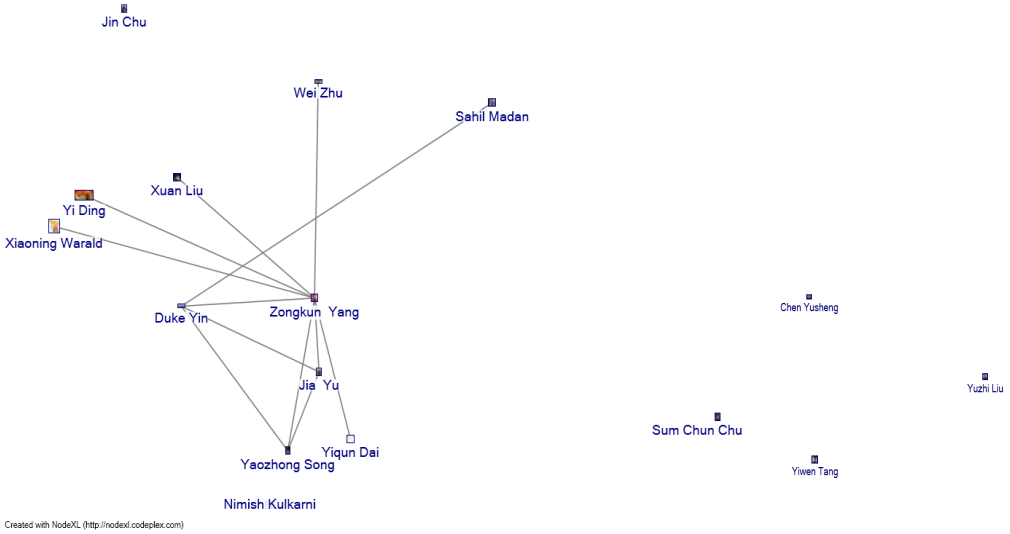
1.The relationships among my facebook friends.

The most interesting thing I want to explore is the relationship among my friends. I chose Fruchterman-Reingold method to display my network graph. There are totally 56 vertices in my network and each one represent a friend of mine. A connected edge between two vertices means these two people have relationship (friend, comment or like) on facebook. As the graph shows, it is obvious that the people in the middle have more relationship with others than those people on the corner. For example, Xin Chen is nearly in the middle of my network graph and he has a large amount of connections with other people. This means Xin Chen has many mutual friends with me. It is very reasonable because a large proportion of my facebook friends are ASU graduate students from China. Another example is the vertex on the top left corner Jin Chu, it doesn't has many connections with other people because Jin Chu is my cousin.

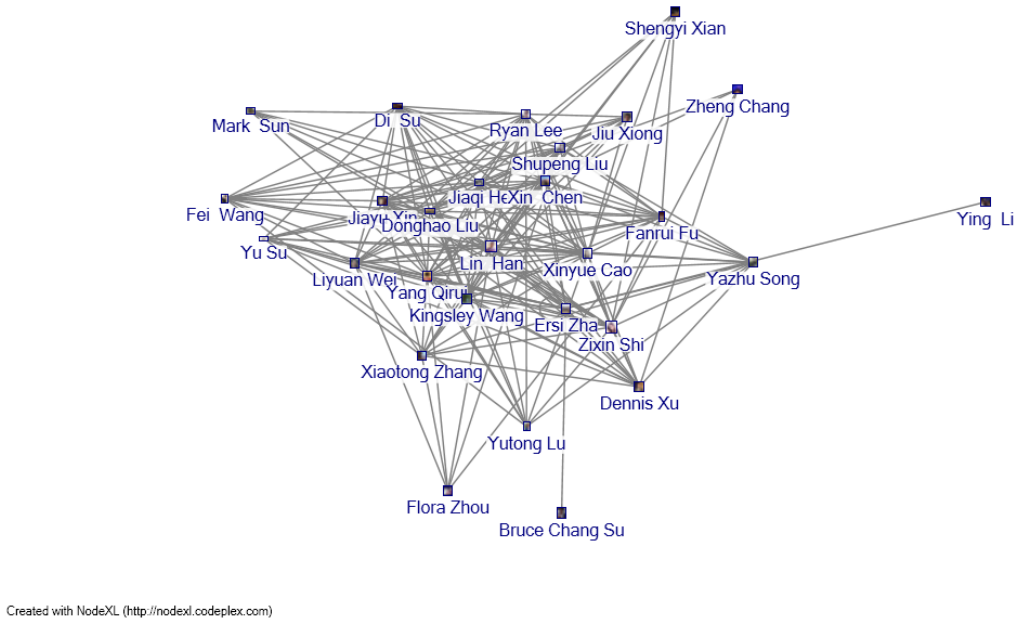


2. Birthday distribution of my facebook friends

Another interesting thing I want to explore is the birthday distribution of all my facebook friends. Based on the original network graph, I filtered out those people with birthday older than 12/31/1991 and younger than 12/31/1989 in vertex filters setting. As the following network graph shows, a large ratio of vertices in original network (nearly 80%) were removed. So it is easily to figure out that most of my facebook friends were born in 1990 and 1991.



The following network graph depicts those people were born in 1990 and 1991

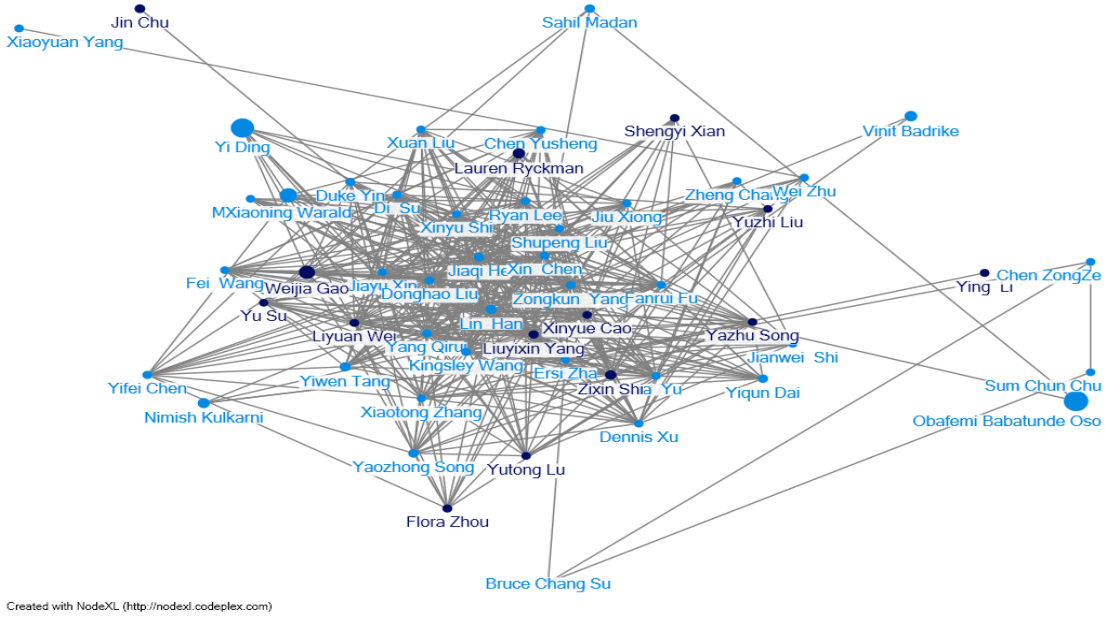


3. Sex ratio and friend counts of my facebook friends

The last interesting characteristic I want to explore is the sex ratio and friend counts of my facebook friends. In autofills columns settings, I set the vertex size by using the values in friend_count columns and set the vertex color according to sex categories.

Vertex	Color	Size	Sex	friend_count
Obafemi Babatunde Oso	0, 12, 96	10.0	male	3835
Yi Ding	0, 12, 96	9.1	male	3431
Xiaoning Warald	0, 12, 96	5.1	male	1661
Weijia Gao	0, 136, 227	4.5	female	1353
Vinit Badrike	0, 12, 96	2.8	male	603
Lauren Ryckman	0, 136, 227	2.7	female	553
Nimish Kulkarni	0, 12, 96	2.5	male	500
Zixin Shi	0, 136, 227	2.3	female	392
Lin Han	0, 12, 96	2.2	male	327
Bruce Chang Su	0, 12, 96	2.1	male	300
Yiwen Tang	0, 12, 96	2.1	male	285
Jin Chu	0, 136, 227	1.9	female	227
Yaozhong Song	0, 12, 96	1.9	male	211

In the following network graph, light blue vertices represent my male friends and dark blue vertices represent my female friends. Obviously, I have more male friends than female friends in facebook. Furthermore, people with bigger size vertices means that they have more friends in facebook than others. Clearly, my friend Obafemi Oso on the bottom right has the largest number of friend counts.



A critique of the system

There are some shortcomings in the system. First shortcoming is posts limit. NodeXL analyzes the posts from my timeline and my friend's timeline as the data source to create user-user network. But there will be an exception if the number of posts is larger than 300. Due to this limit, I can only analyze the number of posts under 300.
Second, NodelXL doesn't support to acquire the friend counts attribute from facebook data. So I added the friend counts data by myself in order to analyze the friend counts distribution of my facebook friends.