



# **Big Data and Text Analytics Final Project**

**Mei Ming**



THE UNIVERSITY OF  
**CHICAGO**

# Executive Summary

- This project seeks to contribute to an understanding how University of Chicago can be further improved by exploring the original tweet and re-tweet text data.
- Data source related to University of Chicago was pulled out from RCC. IBM SPSS model and text analytics packages were used for text and sentiment analysis.
- The top themes about original tweet and re-tween are Medicine, class, professor, hiring, law and Department, professor, class, respectively. Medical school and law school now gain more public attention, which are good signs. University of Chicago should keep investing or hiring for its medical school, and build connection with its alumnus from law school, which will help increase its reputation and get financial fund.
- By exploring the sentiment analysis, the negative comments gain more public attention and follows, compared with positive comments. There are a lot tweets about the professors' sexual harassment issue, racist and class violence. University of Chicago should take some actions to prevent the students/victims from the professors' sexual assault and prevent attack on campus, avoid class violence.

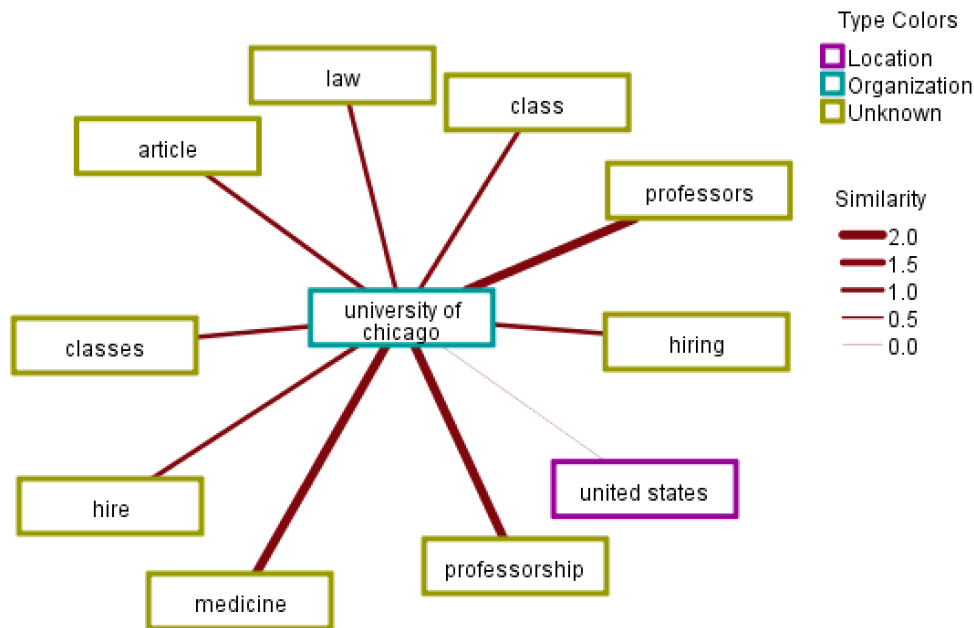


# Methodology and source data overview

- Data source: six keywords (uchicago, university of Chicago, @Uchicago, @uchicagonews, #Uchicago, #uchicagonews) related to University of Chicago were used to pull out tweet date set from RCC.
- IBM SPSS was used to clean, subset the data. IBM SPSS text analytics packages were used for text analysis and sentiment analysis.
- Only English (language) was selected for further text analysis.
- Original tweet and re-tweet relevant to University of Chicago were analyzed separately for top themes.

# Original tweet for University of Chicago

Total Tweet count: 17885



## Top themes

Medicine

Professor

Class

Hiring

Law

## Analysis:

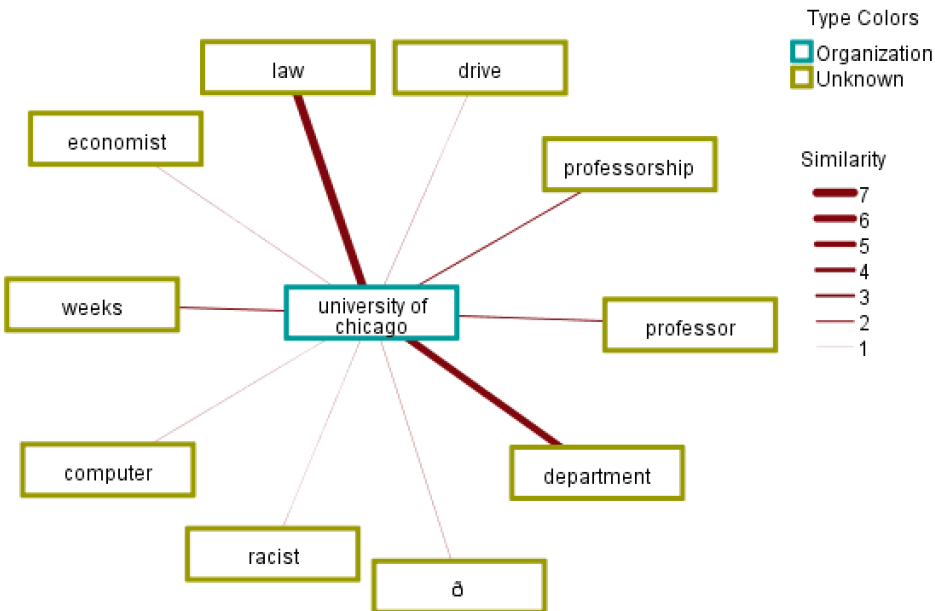
- Theme **Medicine** ranks top for original tweet, which indicates that University of Chicago Medicine gains more attentions and follows. It's a good sign that U of C medical school gains more reputation and ranks higher.
- One of another theme ranks top is **hiring**, which indicates that University of Chicago is trying to increase its hiring and recruit more distinguished faculties to help establish its reputation world widely.
- Law** is another top theme, which might be relevant to President Obama, since he used to work at law school at University of Chicago.

(2/2) University of Chicago Law School for people that had Obama as their constitutional law professor. - Louie Gohmert (Politician) #VIP

@John\_Kass Didn't Obama teach at University of Chicago Law School as Scalia did? Another Chicago tie for him to attend the funeral.

# Re-tweet for University of Chicago

Total Re-Tweet count: 15697



## Top themes

Department

Law

Professor

Weeks

Computer

RT @sofiaorden: Human Genetics - The University of Chicago Department of Human... #Biology <https://t.co/pEsdHhaD6n> #Biology

RT @sofiaorden: Microbiology - The University of Chicago Department of... #Biology <https://t.co/8UFYcMHBbD> #Biology

## Analysis:

- Top themes for re-tweet count is **department**, including biology, microbiology, human genetics, etc. These topics are related to research in academics, which indicates that University of Chicago put a lot effort on research in order to gaining more reputation.
- Another top theme is **professor**. There are a lot of complaints about the improper behavior or sexual harassment issue. Some actions or preventive steps must be taken to stop it.

RT @arcee43: An article by The New York Times about Jason Lieb, a University of Chicago professor who stepped down amid a sexual harassmentâ€¦

RT @ABC7Chicago: University of Chicago professor resigns following sexual harassment allegations: <https://t.co/5cBQUOUP7T> <https://t.co/vaoJâ€¦>

# Sentiment analysis for University of Chicago

	Original tweet	Re-tweet	Ratio
University of Chicago	11977	13185	1.1
Positive	575	474	0.8
Negative	2095	5410	2.6

	Original tweet	Re-tweet	Ratio
University of Chicago professor	125	425	3.4
Positive	7	0	0
Negative	36	152	2.6

	Original tweet	Re-tweet	Ratio
classes	839	738	0.88
Positive	29	27	0.93
Negative	101	381	3.8

## Sentiment analysis:

- Overall, there are more negative attitude towards University of Chicago, regardless original tweet or re-tweet. Especially for re-tweet, it mainly focus on negative comments, which indicates that negative comments could gain more attention and follows, compared with positive comments.
- In terms of University of Chicago **professor**, there are several times more negative comments compared with positive ones. For re-tweet, all comments are negative.
- In terms of negative attitudes towards **classes**, a lot of issues related to **racist** and campus **violence** have been found. So how to keep race equality and prevent from class violence are important issues that need more actions.

RT @WriteAllDay\_: .@UChicago didn't think we were serious. Well. Students Want Fraternity Suspended Over Racist Emails <https://t.co/rR1Ykâ€¦>

RT @mildred43533: University of Chicago calls off classes for a day over online threat of gun violence

# Recommendations

- University of Chicago should invest or keep hiring more faculties for its medical school since it gains more public attention, and continue its focus on research, which will help build its reputation and establish its top tier ranking position.
- By building more connections with alumnus from law school or inviting them back to work at University of Chicago, such as presidents, senators, politicians, etc. can help boost university's ranking position, and raise more financial funds.
- University of Chicago should take some actions to prevent the students/victims from the professors' sexual assault and sexual misconduct, or some policies should be provided regarding University's prevention related to sexual misconduct by professor.
- Class or campus safety is another important issue that needs to be addressed by University of Chicago to prevent attacks on campus, or special training can be offered to help avoid class violence.