



[Please feel free to modify/reuse this assignment in your class]

Sample Social Media Analytics Assignment: Instagram - Geographic Comparison

Objectives: The goal of this assignment is to apply techniques from social media analytics, text mining and social network analysis to analyze online discourse and network data to discover and compare data from various geographical points.

Objective 1: Understand various techniques in collecting social media data through a number of queries.

Objective 2: identify main topical themes from online discussions as well as understand network properties to determine the how information moves between individuals.

Objective 3: Discover the similarities and differences of online communities based on a geographic and topical comparison.

Software: Netlytic (<https://netlytic.org>)

Software Documentation (Videos and Guides):

https://netlytic.org/home/?page_id=11280

Data source: Publically available social media data from Twitter, Facebook, Instagram or Youtube. Datasets for this assignment will be collected by students using Netlytic.

Main Steps:

1) Review two case studies of applying social media analytics using both text and network analysis available in Netlytic:

- Text analysis with Netlytic: Sochi 2014 - <https://netlytic.org/home/?p=168>
- Network analysis with Netlytic: Oscars 2014 - <https://netlytic.org/home/?p=171>

2) Review Video Tutorial: Importing from Instagram to become familiar with how to create efficient search queries.

3) Select a capital city from a list provided by the instructor.

4) Using Netlytic, develop two Instagram queries: one based on a hashtag the other based on location (the coordinates for your city centre).

5) Analyze these datasets using Netlytic's text and network analysis features. The outcome of this step will be a set of interactive visualizations.

5) Finally, use the resulting visualizations to complete Objectives 1-3 and prepare a final report (~5 pages). The written project report should be submitted electronically via the course website. The instructor will provide the report template.

Questions to consider addressing in your report:

- What main topics occur in your hashtag query and location query? Is there any overlap? What topics were most popular? Least popular? What topics did you find surprising in the analysis?
- Discuss the change of topics over time and any influencing factors contributing to drastic changes.
- Looking at the text analysis categories, what impressions do you have about the tone of the conversation? Which categories were most popular?
- Looking at the network analysis, describe at least 3 network measures and what they mean in regard to the communication network interactions.

6) Present project results in small class groups¹, in a form of “**lightning talk**” (http://en.wikipedia.org/wiki/Lightning_talk). Students should come prepared to discuss:

- What data was collected (hashtag and geographic location)
- Main findings from text analysis: popular topics, trends, and categories
- Main findings from network analysis: discuss 1 network measure
- Collaboratively compare and contrast online discussions and communities occurring from one city to the next.

The lightning talk presentation should be accompanied by up to **3 Power Point slides saved as PDF** and submitted electronically via the course website 24 hours before the oral presentation.

Each group will provide one delegate to present the groups’ general findings. Time will be given for students to discuss as a class any patterns, similarities, or differences they’ve noticed working with various datasets.

¹ ** Groups may be determined by instructor at random or based on some geographic similarities (e.g. Western vs. Eastern states/provinces).

Appendix A: List of Capital Cities (Instructor Copy)

Please feel free to modify this list to represent a comparative of specific geographic regions. This list was provided to compare and contrast North American discussions as related to capital cities of Canada and the USA.

Place	Student(s) Assigned
Ottawa, ON	
St. John's, NFLD	
Fredericton, NB	
Halifax, NS	
Charlottetown, PEI	
Quebec, QC	
Toronto, ON	
Winnipeg, MB	
Regina, SK	
Edmonton, AB	
Victoria, BC	
Iqaluit, NU	
Yellowknife, NWT	
Whitehorse, YK	
Montgomery, AL	
Juneau, AK	
Phoenix, AZ	
Little Rock, AR	
Sacramento, CA	
Denver, CO	
Hartford, CT	
Dover, DE	
Tallahassee, FL	
Atlanta, GA	

Honolulu, HI	
Boise, ID	
Springfield, IL	
Indianapolis, IN	
Des Moines, IA	
Topeka, KS	
Frankfort, KY	
Baton Rouge, LA	
Augusta, ME	
Annapolis, MD	
Boston, MA	
Lansing, MI	
Saint Paul, MN	
Jackson, MI	
Jefferson City, MO	
Helena, MT	
Lincoln, NE	
Carson City, NV	
Concord, NH	
Trenton, NJ	
Santa Fe, NM	
Albany, NY	
Raleigh, NC	
Bismarck, ND	
Columbus, OH	
Oklahoma City, OK	
Salem, OR	
Harrisburg, PA	

Providence, RI	
Columbia, SC	
Pierre, SD	
Nashville, TN	
Austin, TX	
Salt Lake City, UT	
Montpelier, VT	
Richmond, VA	
Olympia, WA	
Charleston, WV	
Madison, WI	
Cheyenne, WY	