

SOCIAL MEDIA ANALYTICS

MIS 382N Unique 04065

T Th 2:00 - 3:30 p.m. (GSB 3.104)

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Course Overview

The rapid proliferation of social media has created an unprecedented opportunity for enterprises to engage in real-time interactions with customers, and to enhance brand, customer loyalty, competitiveness, growth and profitability. Facebook statistics (from early 2012), which include 850 million users, 100 billion connections, 250 million daily photo uploads and 2.7 billion daily likes, suggest that companies can ill-afford to ignore the potential of social media. According to one source, LinkedIn adds two new users every second, Instagram gets 575 likes per second, and as a country, Twitter would be the 12th largest in the world. Such numbers make it imperative to develop strategies to create and extract value from this rapidly growing phenomenon. This course is designed to showcase the virtually unlimited opportunities that exist today to leverage the power of social media. It focuses on a gamut of questions ranging from strategic to operational matters pertaining to a firm's social media initiatives, metrics to capture relevant outcomes, and predictive analysis to link social media chatter to business performance.

Learning Objectives

This course is especially valuable to students contemplating careers in business analytics, marketing, prediction modeling, consulting and general management. Students taking this course will develop expertise in the following areas:

1. Strategic aspects of social media analytics
2. Metrics for assessing the effectiveness of social media strategies
3. Collecting, analyzing, deriving insights from, and dashboarding social media chatter
4. Practical analytical and technical skills that differentiates you in any modern enterprise
5. Techniques for sentiment analysis and text analytics

6. Real world social media applications

Students are not required to have a deep knowledge of statistics (though a basic understanding is necessary), data mining or technical ability in programming languages and software applications. The content of this course is presented in an intuitive format with emphasis on the connection between social media and business strategies. A key feature of this course is the use of hands-on software tools for analyzing social media interactions.

Course Material

Textbooks

"Analyzing Social Media Networks with NodeXL: Insights from a Connected World"

by Derek Hansen, Ben Shneiderman and Marc A. Smith

Publisher: Morgan Kaufmann; 1 edition (September 10, 2010)

ISBN-10: 0123822297

ISBN-13: 978-0123822291

Readings list (course packet available at IT Copy & Printing, 512 W Martin Luther King Jr, Austin, TX 78701, Tel: 512-476-6662)

Articles

1. "Social Media" HBS 510095-PDF-ENG
2. "The new conversation: Taking social media from talk to action" HBS 10815-PDF-ENG
3. "It is not the size of a customer's network that matters; it's what they do with it."
<http://www.wired.co.uk/news/archive/2012-08/13/customer-network-lifetime-value>
4. "A Vital New Marketing Metric," <http://predictive-marketing.com/index.php/a-vital-new-marketing-metric-the-network-value-of-a-customer/>
5. "How valuable is word of mouth?" HBS R0710J-PDF-ENG
6. "Predicting the future with social media"
<http://www.hpl.hp.com/research/scl/papers/socialmedia/socialmedia.pdf>
7. "New social media polling data suggests Republican Scott Brown will trounce Democrat Martha Coakley in US Senate Race"
<http://www.wordstream.com/blog/ws/2010/01/14/ma-senate-race-poll-scott-brown-trounces-martha-coakley>
8. "How to use the new Google Analytics social reporting tool"
<http://www.socialmediaexaminer.com/google-analytics-social-reports/>
9. "Networks, Crowds and Markets", Chapter 2 ("Graphs")
10. "Networks, Crowds and Markets", Chapter 3 ("Strong and Weak Ties")
11. "Networks, Crowds and Markets", Chapter 4 ("Networks in their Surrounding Contexts")

12. "Identifying Influential and Susceptible Members of Social Networks"
<http://www.sciencemag.org.ezproxy.lib.utexas.edu/content/337/6092/337.full.pdf>
13. "Sentiment Analysis and Opinion Mining" Chapter 3 "Document Sentiment Classification".
14. "Combining knowledge and Data Mining to Understand Sentiment"
http://www.sas.com/resources/whitepaper/wp_27999.pdf
15. "Increasing the ROI of Social Media Marketing," HBS SMR431-PDF-ENG
16. "If You Love Something, Let It Go Mobile: Mobile Marketing And Mobile Social Media 4x4" HBS BH466-PDF-ENG

Case studies

1. "Demand Media" 511043-PDF-ENG
2. "Social Media Strategy for the Minnesota Wild" by J. Moses, R. Bapna and N. Chervany
3. "Meteor Solutions: Measuring the Value of Social Media Marketing" HBS KEL548-PDF-ENG

Grading

Your course grade will be based on the following:

Item	Date due	Weight
1 individual assignment	1/31	9%
3 group assignments	2/14, 4/9, 4/23	21%
Group project	4/30 or 5/2 (based on random draw)	20%
Midterm	Handed out 3/5, due 3/26 by 11:59 p.m.	20%
Take home final	Handed out May 3, due May 10 by 11:59 p.m.	25%
Class participation		5%

Class participation

In this class much of the learning is dependent on the accessing the combined knowledge and experience of the group. It is everyone's job to keep the discussion productive and moving forward. In evaluating your class participation grade, I take the following into consideration:

- useful arguments expressed coherently and succinctly
- good analysis supported by case facts or your own experience
- relevance to previous contributions, i.e. ability to listen and build on what others say
- constructive disagreement
- regard, respect and acknowledgment of others' contributions
- readiness to contribute to class discussions

Group project (20%)

During the second half of the course, students will work in groups of **six** on a social media analytics project dealing with real world data. You will be responsible for forming your own team. Topics can vary widely depending on student experience and interest, and can include how social media affects brand, sales and other business outcomes, what type of messages are effective in social media, and analysis of customer network value. Groups will be responsible for initiating contact with organizations or finding sources of data. Groups will make their final presentations on either 4/30 or 5/2 (based on a random draw).

Course Agenda

Date	Topic	Readings
1/15	Introduction	<ul style="list-style-type: none"> • “Social Media” HBS 510095-PDF-ENG • “The new conversation: Taking social media from talk to action” HBS 10815-PDF-ENG
1/17	The need to measure customer network value	<ul style="list-style-type: none"> • “It is not the size of a customer’s network that matters; it’s what they do with it.” http://www.wired.co.uk/news/archive/2012-08/13/customer-network-lifetime-value • “A Vital New Marketing Metric,” http://predictive-marketing.com/index.php/a-vital-new-marketing-metric-the-network-value-of-a-customer/ • “How valuable is word of mouth?” HBS R0710J-PDF-ENG
1/22	Predictive analytics and social media	<ul style="list-style-type: none"> • “Predicting the future with social media” http://www.hpl.hp.com/research/scl/papers/socialmedia/socialmedia.pdf • “New social media polling data suggests Republican Scott Brown will trounce Democrat Martha Coakley in US Senate Race” http://www.wordstream.com/blog/ws/2010/01/14/masenate-race-poll-scott-brown-trounces-martha-coakley
1/24	Google social media analytics	<ul style="list-style-type: none"> • “How to use the new Google Analytics social reporting tool” http://www.socialmediaexaminer.com/google-analytics-social-reports/
1/29	Introduction to	<ul style="list-style-type: none"> • “Networks, Crowds and Markets”, Chapter 2 (“Graphs”), 3

	social networks	("Strong and Weak Ties")
1/31	Assignment 1 (individual): "Demand Media" case study	<ul style="list-style-type: none"> • Case write-up due at the beginning of class
2/5	Social network metrics	<ul style="list-style-type: none"> • "Analyzing Social Media Networks with Node XL", Chapters 3 ("Social Network Analysis"), 5 ("Calculating and Visualizing Network Metrics")
2/7	Social network analysis, homophily, and affiliation	<ul style="list-style-type: none"> • "Analyzing Social Media Networks with Node XL", Chapter 7 ("Clustering and Grouping") • "Networks, Crowds and Markets", Chapter 4 ("Networks in their Surrounding Contexts")
2/12	Social influence	<ul style="list-style-type: none"> • "Identifying Influential and Susceptible Members of Social Networks" http://www.sciencemag.org.ezproxy.lib.utexas.edu/content/337/6092/337.full.pdf
2/14	Assignment 2 (group): Creating and tracking a viral video	<ul style="list-style-type: none"> • Student groups will submit a written report and present their work in class
2/19	Presentation by guest speaker	
2/21	Analyzing Twitter and Facebook	<ul style="list-style-type: none"> • "Analyzing Social Media Networks with Node XL", Chapters 10 & 11
2/26	Analyzing Email and Wikis	<ul style="list-style-type: none"> • "Analyzing Social Media Networks with Node XL", Chapters 8 & 15
2/28	Sentiment analysis	<ul style="list-style-type: none"> • "Sentiment Analysis and Opinion Mining" Chapter 3 "Document Sentiment Classification".
3/5	Review session	
3/7	Midterm	<ul style="list-style-type: none"> • Take home midterm handed out
3/19	Hands on session with social media tools	
3/21	Hands on session, project discussion	
3/26	Sentiment analysis	<ul style="list-style-type: none"> • Hands-on session with LightSide • Take home midterm due by 11:59 p.m.
3/28	Sentiment analysis	<ul style="list-style-type: none"> • "Combining knowledge and Data Mining to Understand Sentiment" http://www.sas.com/resources/whitepaper/wp_27999.pdf
4/2	Text analytics	<ul style="list-style-type: none"> • SAS Text Miner (will be posted on the BB)

4/4	Text analytics	<ul style="list-style-type: none"> • Hands-on session
4/9	Assignment 3 (group): “Social Media Strategy for the Minnesota Wild”	<ul style="list-style-type: none"> • “Social Media Strategy for the Minnesota Wild” case write-up due at the beginning of class
4/11	Social media ROI	<ul style="list-style-type: none"> • “Increasing the ROI of Social Media Marketing,” HBS SMR431-PDF-ENG
4/16	Guest speaker	
4/18	Mobile social web	<ul style="list-style-type: none"> • “If You Love Something, Let It Go Mobile: Mobile Marketing And Mobile Social Media 4x4” HBS BH466-PDF-ENG
4/23	Assignment 4 (group): Social media ROI case analysis	<ul style="list-style-type: none"> • “Meteor Solutions: Measuring the Value of Social Media Marketing” write-up due at the beginning of class.
4/25	Project consultations	<ul style="list-style-type: none"> • Final discussion of deliverables, report and presentation formats
4/30	Project presentations	<ul style="list-style-type: none"> • All groups should be ready to present their work on 4/30. Half the groups will be chosen randomly to present their analysis. PowerPoint slides will be submitted by all groups by the beginning of class.
5/2	Project presentations	<ul style="list-style-type: none"> • Remaining groups will present their work.
5/3	Take home final handed out	
5/10	Take home final due by 11:59 p.m.	