COMM 4558 SOCIAL MEDIA ANALYTICS SPRING 2023

Instructor:

Professor Joseph Bayer, PhD [email: bayer.66@osu.edu]

Online Lecture: Tuesdays, 3:55pm-4:45pm EST [see Carmen for Zoom Links]

Office Hours: Tuesdays, 1:30pm-3:00pm EST [Schedule Link]

Course description

The is an online course. The course represents an introduction to analyzing social media data with an emphasis on the implications and applications for market research, communication strategy, and technology history. How do we know whether a feature on the new iPhone is working? What type of consumers are most likely to buy a given product? How does the perception of a platform change after a crisis? Social media streams can provide valuable insights into users, brands, audiences, and technologies. The course provides an overview of the approaches and challenges associated with collecting, analyzing, and visualizing social media data, including an involved case report using real-world social analytics software.

Course learning goals and outcomes

The primary objectives of this course are to teach students how to obtain, monitor, and evaluate social media data from major online platforms (e.g., Twitter). When we are finished, you will be prepared to approach future industry and academic problems with an understanding of how social media data can help accomplish your goals. You will learn the advantages/disadvantages of using social media data, how to operate established analytics platforms, and how to engage in market research to study emerging technologies. Altogether, you will acquire the fundamental perspectives and hands-on skills needed to work with social media data.

Mode of delivery

This course is delivered fully online. There are no in-person components required. The course includes a combination live (i.e., synchronous) lectures and prerecorded tutorials, along with online activities and assignments that can be completed at your discretion.

How this course works

• Each week, a new **module** will become available on the course Carmen site that contains all of the online requirements associated with that week. Each module will specify the required readings, as well as provide links to the live lectures, interactive activities, pre-recorded videos, and analytics tools needed for that week.

- On Thursdays, you will be able to participate in an online (live) lecture at 4:00pm EST via Zoom (see link on Carmen). The lecture will be taught in the form of a live tutorial involving data-driven activities and analysis through Netlytic and Infegy.
- This is a 3-credit-hour course. As such, students should expect around 3 hours per
 week of time spent on direct instruction. Specifically, students should anticipate an
 average of about 60 minutes of live lecture, 30 minutes of prerecorded tutorial videos,
 45 minutes of technology installation and/or setup, and 45 minutes of weekly
 participation, in addition to 6 hours of homework per week (i.e., readings, assignments).
- All assignments are due 11:59pm EST on Mondays. See detailed instructions on Carmen for the specific steps, formatting requirements, and grading rubric.

Course materials

- You can access all course readings and materials by clicking through the links in the weekly
 course modules on our Carmen site. In addition, the required readings and assignment
 instructions/rubrics will be organized within the Files section of the site.
- Although the course will focus primarily on teaching hands-on analytics course, the following books are recommended as part of the weekly course readings:
 - o **[F&D]** Finger, L. & Dutta, S. (2014). Ask, Measure, Learn: Using Social Media Analytics to Understand and Influence Customer Behavior. Sebastopol, CA: O'Reilly.
 - [Knaflic] Knaflic, C. N. (2015). Storytelling with Data: A Visualization Guide for Business Professionals. Hoboken, NJ: Wiley.
- Access to Netlytic (via <u>this external URL</u>) and Infegy (via <u>this external URL</u>) for data analysis and vizualization. More information about accessing the analytics platforms will be provided within the software demonstrations and Carmen modules.
- Access to a computer/laptop, a high-speed Internet connection, current web browser with video-related plugins, speakers/headphones, and Microsoft Office (available to OSU student free of charge via this external URL). Students should not attempt to complete this course using a smartphone. You must be comfortable working more independently than in an in-person classroom and using your computer, web-browser, and navigating Carmen. Additionally, you must ensure that your computer functions properly and that you use some form of data redundancy (e.g., cloud backups or physical duplication). Please see the technology policy below for more details.

Grading

This class has 100 possible points, which are distributed as follows:

Attendance 8 points
Participation 8 points
Checkpoint 4 points
Software Comparison 10 points

Netlytic Report #1 10 points
Netlytic Report #2 10 points
Infegy Report #1 10 points
Infegy Report #2 10 points
Case Study Proposal 10 points
Case Study Report 20 points

Assignments

- Attendance (8pts). An attendance grade will be assigned at the end of the course based on your active participation in synchronous (online) lecture activities. You must attend at least 8 separate live lectures during the semester to receive full points for attendance (earning I point per class). In addition, you are eligible to earn extra credit by participating in the optional TopHat activities during the lecture (up to 2 points).
- Participation (8pts). A participation grade will be assigned at the end of the course based on your active participation in weekly TopHat discussion activities. On most weeks, a new discussion question will be posted on TopHat. You are required to submit a response to the TopHat Thread by the module end date at 11:59pm EST. You will lose I point for each missed TopHat thread.
- Checkpoint (4pts). In online courses, there are fewer opportunities for professors to interact with their students directly. As such, there is a tendency for students to avoid asking for help when they need it, especially for questions that they perceive as "too small" or "too stupid." Professors can also do a poor job of checking if things are making sense and linking the course objectives to the personal goals of their students. The "checkpoint" slots are meant to address these issues and make sure you are on track in 4558. Each checkpoint consists of a brief one-on-one meeting with Prof. Bayer (~10min) over Zoom. You will earn I points for completing the Checkpoint Form at the start of the term and 3 points for completing a Checkpoint Zoom meeting. Prof's Bayer's open Zoom Checkpoint slots can be found here. Alternatively, you can also complete your Checkpoint Zoom during Prof Bayer's Office Hours.
- **Software Comparison (10pts).** There are many sources of social media data out there, including software companies offering to provide social "listening", "managing", and/or "analytics". You are tasked with providing a recommendation to an employer of your choice about which software to purchase. To do so, you must identify two services that provide capabilities to conduct social media analyses (cannot be Netlytic or Infegy), compare them, and come to a recommendation. You must use G2.com to identify your analytics software choices. Use I2-point font and I-inch margins, with each text section should be no more than a short paragraph (5-6 sentences max). Make your document single-spaced (max of one single-spaced page). Follow the general header formatting shown in the example on Carmen.

Netlytic Reports (10pts x2). You will report the results of text and network analytics related to a self-selected product on Netlytic. Your goal is to apply techniques from social media analytics to analyze online discourse about a product of your choice (e.g., Apple Airpods). A top report will identify the key themes/influencers and insights (e.g., what people are saying about your product, who is talking about your product?) as well as discuss how to use your findings to improve the product or develop a new communication strategy. Importantly, you will collect publicly available Twitter data about a chosen product and analyze it with the help of Netlytic. For each report, use 12-point font and I-inch margins. Each text section should include no more than 3-4 sentences of text. Make your text single-spaced and clearly specify the header of each section as shown in the example on Carmen. Max of one page (including figures).

- Infegy Reports (10pts x2). You will report the results of visualized analytics related to market research of a modern technology using Infegy. You are tasked with (1) demonstrating your efficacy in using Infegy to select, filter, and report datasets and (2) showing your ability to present data in an accurate, informative, and efficient manner. Importantly, you must complete your report using Infegy. Note you will need to sign-in your OSU.# email address and course password. Use 12-point font and 1-inch margins. Include your name in the header. Each figure should include no more than 3-4 sentences of text. Make your text single-spaced. For each report, you can either export your Infegy Report page as a PDF or export the images and create your PDF in another program (e.g., Microsoft Word). Max of one page (including figures).
- Case Study Proposal (10pts). In the Case Study Proposal, you will outline a market research project in which you use social analytics to learn about a technology, type of technologies, or tech trend of your choice. Note that your proposal must focus on using Infegy as your social listening tool (i.e., not other analytics tools). You and a partner will design the data collection and analytics plan, including how exactly you would employ Infegy to learn about and report on the topic of your choice. Use 12-point font and include both partner names in the header. Each bullet should include no more than 2-3 sentences of text. Make your text single-spaced. Max of one page (including figures).
- Case Study Report (20pts). In the Case Study Report, you will generate figures and findings related to the market research topic of your choice. Note that your report must focus on using Infegy as your social listening tool (i.e., not other analytics tools), and you must use one of the final queries available in our shared class dashboard. Altogether, you and a partner will work together to compile and complete a professional analytics report using what you have learned across the semester. For each figure, as a brief paragraph, provide a brief explanation and any takeaway insights (~3-4 sentences max). In addition, as a brief outline, specify the subtopic you selected, all filters applied, and the size of your active corpus (i.e., number of mentions). Use 12-point font and include both partner names in the header. For this report, you must

export the images and create your PDF in another program (e.g., Word). Max of two pages (including figures), but you are allowed to use narrow margins (i.e., 0.5in).

Late assignments

Assume that all deadlines are in Eastern Time (ET). Students may submit all assessments late with a penalty. Penalties for late work increase cumulatively.

Grading scale

Please note that Carmen Canvas, OSU's grading and class management software, does not round fractions up. The official grading scale is as follows:

93-100: A	73–76.9: C
90-92.9: A-	70 –72.9: C-
87-89.9: B+	67 –69.9: D+
83-86.9: B	60 -66.9: D
80-82.9: B-	Below 60: E
77-79.9: C+	

Credit hour and work expectation

This represents a 3-credit-hour course. According to Ohio State policy, students should expect around 3 hours per week of time spent on direct instruction (instructor content and Carmen activities, for example) in addition to 6 hours of homework (reading and assignment preparation, for example) to receive a grade of (C) average. ASC Honors provides an excellent guide to scheduling and study expectations.

Faculty feedback and response time

I am providing the following list to give you an idea of my intended availability throughout the course. (Remember that you can call **614-688-HELP** at any time if you have a technical problem.)

Grading and feedback

For large weekly assignments, you can generally expect feedback within **7-14 days**.

E-mail

Prof. Bayer will reply to e-mails within 24 hours on school days.

Virtual office hours

Virtual office hours will be held through Ohio State's conferencing platform, Carmen Zoom. Dr. Bayer's digital meeting room can be accessed via the link posted on our Carmen site. Students may use the audio and video functions if a webcam and microphone are available. If not, there is still a chat function within Zoom for the student to live chat with the professor in the virtual office hours room. A guide to accessing Zoom is available online here (Links to an external

site.) and students can access support for Carmen Zoom here (Links to an external site.).

Common issues to avoid...

- Carmen mail/messenger + submission comments. Both of these are unreliable and the I will not check them regularly.
- **Weekend + evening emails.** Under most circumstances, I will respond to messages of this sort on the next business day.
- **Sending emails NOT from your OSU email.** Messages to our OSU accounts from non-OSU email services are regularly marked as spam and since their OSU cannot confirm their delivery, you may not use them as evidence of communication attempts.
- **Unprofessional emails.** Please ensure that your email messages are professional and informative by including your course info in the subject line, a salutation, adequate yet concise body text, closing, and your full name.
- Emails that require immediate attention. I aim to answer emails with 24 hours of receipt on business days. Be proactive and plan ahead.

Course Technology

For help with your password, university e-mail, Carmen, or any other technology issues, questions, or requests, contact the OSU IT Service Desk. Standard support hours are available at https://ocio.osu.edu/help/hours, and support for urgent issues is available 24x7.

• Carmen:

- Carmen, Ohio State's Learning Management System, will be used to host materials and activities throughout this course. To access Carmen, visit <u>Carmen.osu.edu</u>. Log in to Carmen using your name.# and password. If you have not setup a name.# and password, visit <u>my.osu.edu</u>.
- Help guides on the use of Carmen can be found at <u>https://resourcecenter.odee.osu.edu/carmen</u>
- This online course requires use of Carmen (Ohio State's learning management system) and other online communication and multimedia tools. If you need additional services to use these technologies, please request accommodations with your instructor.
 - Carmen accessibility

• Carmen Zoom:

 Office hours will be held through Ohio State's conferencing platform, Carmen Zoom. A separate guide to accessing Carmen Zoom and our office hours is posted on the course Carmen page under Files.

- Students may use the audio and video functions if a webcam and microphone are available. If not, there is still a chat function within Carmen Zoom for the student to live chat with the professor or TA in the virtual office hours room.
- o Carmen Zoom help guide

Turnitin:

Students at The Ohio State University are accountable for the integrity of the work they submit. Therefore, you should be familiar with the guidelines provided by the Committee on Academic Misconduct (COAM) and Section A of OSU's Code of Student Conduct in order to meet the academic expectations concerning appropriate documentation of sources. In addition, OSU has made Turnitin, a learning tool and plagiarism prevention system, available to instructors. For this class, you will submit your papers to Turnitin from Carmen. When grading your work, I will interpret the originality report, following Section A of OSU's Code of Student Conduct as appropriate. For more information about Turnitin, please see the vendor's guide for students. Note that submitted final papers become part of the OSU database.

• Self-Service and Chat support: http://ocio.osu.edu/selfservice

• **Phone:** 614-688-HELP (4357)

Email: 8help@osu.eduTDD: 614-688-8743

Baseline technical skills necessary for online courses

Basic computer and web-browsing skills

Navigating Carmen

Necessary equipment

- Computer: current Mac (OS X) or PC (Windows 7+) with high-speed internet connection
- Web cam and microphone

Necessary software

- Word processor with the ability to save files under .doc, .docx, .rtf, or .pdf. Most popular word processing software programs including Microsoft Word and Mac Pages have these abilities.
- OSU students have access to Microsoft Office products <u>free of charge</u>. To install, please visit https://osuitsm.service-now.com/selfservice/kb view.do?sysparm article=kb04733
- Access to Netlytic (via this external URL) and Infegy (via this external URL) for data analysis and visualization. More information about accessing the analytics platforms will be provided within the software demonstrations and Carmen modules.
 - The privacy policy for Netlytic is available via this external URL. The privacy policy for Infegy is available via this external URL.
 - o Questions concerning the accessibility of the necessary social analytics software

(i.e., Netlytic, Infegy) can be addressed to the Office of Student Life Disability Services (SLDS). Please visit this external URL for more information.

University Policies

Student Academic Services

Arts and Sciences Advising and Academic Services' website provides support for student academic success. Information on advising issues such as tutoring, transfer credits, academic standing, and contact information for Arts and Sciences advisors can be obtained through this website. The site is: http://advising.osu.edu/welcome.shtml

Student Services

The Student Service Center assists with financial aid matters, tuition and fee payments. Please see their site at: http://ssc.osu.edu

Religious Accommodations

It is Ohio State's policy to reasonably accommodate the sincerely held religious beliefs and practices of all students. The policy permits a student to be absent for up to three days each academic semester for reasons of faith or religious or spiritual belief. Students planning to use religious beliefs or practices accommodations for course requirements must inform the instructor in writing no later than 14 days after the course begins. The instructor is then responsible for scheduling an alternative time and date for the course requirement, which may be before or after the original time and date of the course requirement. These alternative accommodations will remain confidential. It is the student's responsibility to ensure that all course assignments are completed.

Copyright Disclaimer

The materials used in connection with this course may be subject to copyright protection and are only for the use of students officially enrolled in the course for the educational purposes associated with the course. Copyright law must be considered before copying, retaining, or disseminating materials outside of the course.

Diversity

The School of Communication at The Ohio State University embraces and maintains an environment that respects diverse traditions, heritages, experiences, and people. Our

commitment to diversity moves beyond mere tolerance to recognizing, understanding, and welcoming the contributions of diverse groups and the value group members possess as individuals. In our School, the faculty, students, and staff are dedicated to building a tradition of diversity with principles of equal opportunity, personal respect, and the intellectual interests of those who comprise diverse cultures.

Title IX

Title IX makes it clear that violence and harassment based on sex and gender are Civil Rights offenses subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories (e.g., race). If you or someone you know has been sexually harassed or assaulted, you may find the appropriate resources at http://titleix.osu.edu or by contacting the Interim Ohio State Title IX Coordinator, Melissa Mayhan: titlelX@osu.edu or 614-247-5838.

Mental Health

As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce a student's ability to participate in daily activities. The Ohio State University offers services to assist you with addressing these and other concerns you may be experiencing. If you are or someone you know is suffering from any of the aforementioned conditions, you can learn more about the broad range of confidential mental health services available on campus via the Office of Student Life's Counseling and Consultation Service (CCS) by visiting ccs.osu.edu or calling 614--292--5766. CCS is located on the 4th Floor of the Younkin Success Center and 10th Floor of Lincoln Tower. You can reach an on-call counselor when CCS is closed at 614-292-5766. If you are thinking of harming yourself or need a safe, non-judgmental place to talk, or if you are worried about someone else and need advice about what to do, 24-hour emergency help is also available through the Suicide Prevention Hotline (Columbus: 614-221-5445)

Illness and Short-Term Closings

Please note that these policies may be updated to reflect changes in the epidemic, changes in our understanding of diseases, and changing University, local, state, and federal recommendations or mandates. Given the potential high prevalence of COVID and other illnesses, including breakthrough cases among vaccinated individuals, **students should not attend class if they are feeling sick**. It is very important that individuals avoid spreading the virus to others. Most students should be able to complete a successful semester despite illness-induced absence. If you are absent due to illness, including but not limited to COVID, you will be given a reasonable opportunity to make up missed work. **You do not need to provide a physician's document of illness, but you should advise your lab instructor via email as soon as you are safely able to do so.** Should in-person classes be canceled, we will meet virtually via CarmenZoom during our regularly scheduled time. I will share any updates via

CarmenCanvas. Unless otherwise announced by the university, online or distance-learning classes will occur as scheduled.

Academic integrity policy

Policies for this online course

- Written assignments: All written assignments, communications, and posts should be your own original work. In formal assignments, you should follow APA style to cite the ideas and words of your research sources. You are encouraged to ask a trusted person to proofread your assignments before you turn them in – but no one else should revise or rewrite your work.
- Reusing past work: In general, you are prohibited in university courses from turning
 in work from a past class to your current class, even if you modify it. If you want to
 build on past research or revisit a topic you've explored in previous courses, please
 discuss the situation with me.
- Falsifying research or results: All research you will conduct in this course is intended to be a learning experience; you should never feel tempted to make your results or your library research look more successful than it was.

Academic Misconduct

It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term "academic misconduct" includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. Instructors shall report all instances of alleged academic misconduct to the committee (Faculty Rule 3335-5-487). For additional information, see the Code of Student Conduct http://studentlife.osu.edu/csc/

Accessibility accommodations for students with disabilities

Requesting accommodations

Students with disabilities (including mental health, chronic or temporary medical conditions) that have been certified by the Office of Student Life Disability Services will be appropriately accommodated and should inform the instructor as soon as possible of their needs. The Office of Student Life Disability Services is located in 098 Baker Hall, 113 W. 12th Avenue; telephone 614- 292-3307, slds@osu.edu; slds.osu.edu

Course Schedule

Unit A: Collecting Social Media Data

Module Weeks	Week Overview	Assignments
Week I	Introducing the Course	Submission:
Start: Tues. 8/22 End: Mon. 8/28	 Lecture (Tuesday @ 3:55pm EST) Syllabus, Carmen, Assignments Recommended: F&D Ch. 1, 2 	Submit Weekly Thread #1 on TopHat
		See Carmen Module for required reading.
Week 2	Learning via Live Tutorials	Submission:
Start: Tues. 8/29 End: Mon. 9/4	 Lecture (Tuesday @ 3:55pm EST) TopHat, Tutorials, Feedback Recommended: F&D Ch. 3, 4 	Submit Weekly Thread #2 on TopHat
		See Carmen Module for required reading.
Week 3	Finding Social Analytics Tools	Submission:
Start: Tues. 9/5 End: Mon. 9/11	 Lecture (Tuesday @ 3:55pm EST) APIs, Software, G2 Recommended: F&D Ch. 5 	Submit Software Comparison on Carmen
		See Carmen Module for required reading.
Week 4	Obtaining and Cleaning Data	Submission:
Start: Tues. 9/12 End: Mon. 9/18	 Lecture (Tuesday @ 3:55pm EST) Data, CSVs, CSO Recommended: F&D Ch. 6 	Submit Weekly Thread #3 on TopHat
		See Carmen Module for required reading.

Unit B: Collecting Data via Netlytic

Week 5	Collecting Data on Netlytic	Submission:
Start: Tues. 9/19 End: Mon. 9/25	 Lecture (Tuesday @ 3:55pm EST) Netlytic Tutorial Recommended: F&D Ch. 7 	Submit Weekly Thread #4 on TopHat See Carmen Module for required reading.
Week 6	Building Reports on Netlytic	Submission:
Start: Tues. 9/26 End: Mon. 10/2	 Lecture (Tuesday @ 3:55pm EST) Netlytic Tutorial Recommended: F&D Ch. 8 	Submit Weekly Thread #5 on TopHat
		See Carmen Module for required reading.
Week 7	Network Analyses on Netlytic	Submission:
Start: Tues. 10/3 End: Mon. 10/9	 No Lecture Netlytic Tutorial Recommended: F&D Ch. 9 	Submit Netlytic Report #1 on Carmen See Carmen Module for required reading.
Week 8	Text Analyses on Netlytic	Submission:
Start: Tues. 10/10 End: Mon. 10/16	 Lecture (Tuesday @ 3:55pm EST) Netlytic Tutorial Recommended: F&D Ch. 10 	Submit Netlytic Report #2 on Carmen
Autumn Break [Thurs-Fri]		See Carmen Module for required reading.

Unit C: Collecting Data via Infegy

Week 9	Introduction to Infegy	Submission:
Start: Tues. 10/17 End: Mon. 10/23	 Lecture (Tuesday @ 3:55pm EST) Infegy Tutorial Recommended: Knaflic Ch. 1, 2 	Submit Weekly Thread #6 on TopHat
		See Carmen Module for required reading.
Week I0	Querying Data on Infegy	Submission:
Start: Tues. 10/24 End: Mon. 10/30	 Lecture (Tuesday @ 3:55pm EST) Infegy Tutorial Recommended: Knaflic Ch. 3 	Submit Weekly Thread #7 on TopHat
		See Carmen Module for required reading.
Week I I	Filtering Data on Infegy	Submission:
Start: Tues. 10/31 End: Mon. 11/6	 No Lecture Infegy Tutorial Recommended: Knaflic Ch. 4 	Submit Case Study Proposal on Carmen.
		See Carmen Module for required reading.
Week I2	Audience Analyses on Infegy	Submission:
Start: Tues. 11/7 End: Mon. 11/13	 Lecture (Tuesday @ 3:55pm EST) Infegy Tutorial Recommended: Knaflic Ch. 5 	Submit Weekly Thread #8 on TopHat
		See Carmen Module for required reading.

Unit D: Storytelling with Social Traces

Week I3	Sentiment Analyses on Infegy	Submission:
Start: Tues. 11/14 End: Mon. 11/20	 Lecture (Tuesday @ 3:55pm EST) Infegy Tutorial Recommended: Knaflic Ch. 6 	Submit Infegy Report #1 on Carmen. See Carmen Module for
		required reading.
Week I4	Refreshing on Thanksgiving Break	No Submission ©
Start: Tues. 11/21	No Lecture	
End: Mon. 11/27	Recommended: Knaflic Ch. 7	
Thanksgiving Break		See Carmen Module for required reading.
Week I5	Theme Analyses on Infegy	Submission:
Start: Tues. 11/28	Lecture (Tuesday @ 3:55pm EST)	Submit Infegy Report #2 on
End: Mon. 12/4	Infegy Tutorial	Carmen
	Recommended: Knaflic Ch. 8	
		See Carmen Module for required reading.
Week 16	Storytelling with Infegy Data	Submission:
Start: Tues. 12/5	• Lecture (Tuesday @ 3:55pm EST)	Submit Case Study Report
End: Mon. 12/11	Final Takeaways	on Carmen
Final Week		