

Branch Name:	Artificial Intelligence & Data Science
Program Code:	ET108
Semester/Year:	Semester VIII/Fourth Year
Course Name:	Social Media & Text Analysis
Course Code:	1ET1080804
Pre-requisite Course:	Probability and statistics, Programming and data structures

Course Objective:

- Familiarize the learners with the concept of social media.
- Familiarize the learners with the concept of social media analytics and understand its significance.
- Enable the learners to develop skills required for analyzing the effectiveness of social media.
- Familiarize the learners with different tools of social media analytics.
- Familiarize the learner with different visualization techniques for Social media analytics.
- Examine the ethical and legal implications of leveraging social media data.

Teaching and Examination Scheme:

Teaching Scheme Hours per week)				Evaluation Scheme (Marks)				
Lecture (L)	Tutorial (T)	Practical (P)	Credit	Theory (Marks)		Practical (Marks)		Total (Marks)
				University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	
04	-	02	05	70	30	30	20	150

Subject Contents:

Sr. No.	Topic	Total Hrs.	Weightage %
1	Social Media Analytics: An Overview Core Characteristics of Social Media, Types of Social Media, Social media landscape, Need for Social Media Analytics (SMA), SMA in small & large organizations. Purpose of Social Media Analytics, Social Media vs. Traditional Business Analytics, Seven Layers of Social Media Analytics, Types of Social Media Analytics, Social Media Analytics Cycle, Challenges to Social Media Analytics, Social Media Analytics Tools	6	12
2	Social Network Structure, Measures & Visualization Basics of Social Network Structure - Nodes, Edges & Tie Describing the Networks Measures - Degree Distribution, Density, Connectivity, Centralization, Tie Strength & Trust Network Visualization - Graph Layout, Visualizing Network features, Scale Issues. Social Media Network Analytics - Common Network Terms, Common Social Media Network Types, Types of Networks, Common Network Terminologies, Network Analytics Tools.	6	12

3	Social Media Text, Action & Hyperlink Analytics Social Media Text Analytics - Types of Social Media Text, Purpose of Text Analytics, Steps in Text Analytics, Social Media Text Analysis Tools Social Media Action Analytics - What Is Actions Analytics? Common Social Media Actions, Actions Analytics Tools Social Media Hyperlink Analytics - Types of Hyperlinks, Types of Hyperlink Analytics, Hyperlink Analytics Tools	8	30
4	Social Media Location & Search Engine Analytics Location Analytics - Sources of Location Data, Categories of Location Analytics, Location Analytics and Privacy Concerns, Location Analytics Tools Search Engine Analytics - Types of Search Engines, Search Engine Analytics, Search Engine Analytics Tools	6	12
5	Social Information Filtering Social Information Filtering - Social Sharing and filtering , Automated Recommendation systems, Traditional Vs social Recommendation Systems Understanding Social Media and Business Alignment, Social Media KPI, Formulating a Social Media Strategy, Managing Social Media Risks	6	12
6	Social Media Analytics Applications and Privacy Social media in the public sector - Analyzing public sector social media, analyzing individual users, case study. Business use of Social Media - Measuring success, Interaction and monitoring, case study. Privacy - Privacy policies, data ownership and maintaining privacy online.	7	22

List of Reference Books:

1. Seven Layers of Social Media Analytics_ Mining Business Insights from Social Media Text, Actions, Networks, Hyperlinks, Apps, Search Engine, and Location Data, Gohar F. Khan,(ISBN-10: 1507823207).
2. Analyzing the Social Web 1st Edition by Jennifer Golbeck
3. Mining the Social Web_ Analyzing Data from Facebook, Twitter, LinkedIn, and Other Social Media Sites, Matthew A Russell, O'Reilly
4. Charu Aggarwal (ed.), Social Network Data Analytics, Springer, 2011
5. Social Media Analytics [2015], Techniques and Insights for Extracting Business Value Out of Social Media, Matthew Ganis, AvinashKohirkar, IBM Press
6. Social Media Analytics Strategy_ Using Data to Optimize Business Performance, Alex Gonçalves, APress Business Team
7. Social Media Data Mining and Analytics, Szabo, G., G. Polatkan, O. Boykin & A. Chalkiopoulus (2019), Wiley, ISBN 978-1-118-82485-6

e-Resources (If any):

1. <https://cse.iitkgp.ac.in/~pawang/courses/SC16.html>
2. https://onlinecourses.nptel.ac.in/noc20_cs78/preview
3. <https://nptel.ac.in/courses/106106146>
4. <https://7layersanalytics.com/>

List of Suggested titles of Experiments (If Any):

1. Explore various Social Media platform (Facebook, Twitter, Youtubeetc) and Social Media analytics tools (facebook insights, google analytics, netyticetc)
2. Explore Social Media Analytics Technique and engagement metrics (page level, post level member level)
3. Perform data collection from any of the social media platform of your choice (Twitter, Facebook, LinkedIn, Youtube, Web blogs etc)
4. Perform preprocessing of the collected data and store it.
5. Analyze and visualize the social media data Collected. (Reference to Practical 3 and 4)
6. Perform Hyperlink Analytics (Extract, Analyze and Interpret Hyperlinks)
7. Perform Text Analytics (Extract, Analyze Textual content of Social Media Platform and Interpret Hyperlinks)
8. Perform Action Analytics (Analyze likes, mentions of a product, idea or a service)
9. Perform location Analytics (Mine the location of people, data resources and visualize them)
10. Analyze how individual/organization use Social Media and Social media privacy policies()

Course Learning Outcomes (CLO): On completion of this course, the students will be able to:

LO	Description	Bloom's Taxonomy Level
CLO1	Understand the concept of Social media	1 Remembering 2 Understanding
CLO2	Understand the concept of social media Analytics and its significance.	1 Remembering 2 Understanding
CLO3	Learners will be able to analyze the effectiveness of social media	4 Analyze
CLO4	Learners will be able to use different Social media analytics tools effectively and efficiently.	3 Applying
CLO5	Learners will be able to use different effective Visualization techniques to represent social media analytics.	3 Applying

Mapping of CLOs with POs & PSOs

Course Learning Outcomes	Program Outcomes (POs)												Program Specific Outcomes (PSOs)			
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PO11	PO12	PSO 1	PSO 2	PSO 3	PSO 4
CLO1					M	L						H	H	M	L	
CLO2	M		H	M	L					M		M		L	H	
CLO3		L	M		M									H		L
CLO4	M	M			L			M					L		M	H
CLO5																

H: High, M: Medium, L: Low