



Sma vivia

Social Media Analytics (University of Mumbai)



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SMA Vivia

Module 1

1) What is Social Media Analytics and its applications?

→ Social Media Analytics (SMA) is analyzing data from social media platforms to understand trends, patterns, and insights relevant to businesses or individuals.

2). What are the core characteristics of social media?

→ Core characteristics of social media include interactivity, user-generated content, connectivity, real-time communication, and multimedia sharing.

3) What are different social media platforms?

→ Different social media platforms include Facebook, Twitter, Instagram, LinkedIn, YouTube, Snapchat, and TikTok, among others.

4). What is the role of SMA in small organization/big organization?

→ SMA helps both small and big organizations understand customer behavior, market trends, brand perception, and competitors' strategies for informed decision-making.

5) Compare SMA with traditional business analytics?

→ SMA focuses on social media data, while traditional business analytics may include data from various sources like sales, finance, and operations.

6) What are the seven layers of social media analytics? explain 3rd layer.

→ The seven layers of social media analytics include text analytics, network analysis, sentiment analysis, influence analysis, community detection, event detection, and spatial analysis. The 3rd layer, sentiment analysis, examines opinions and emotions expressed in social media posts to gauge public sentiment towards a topic or brand.

7) What are different social media analytics challenges?

→ Challenges in social media analytics include data privacy concerns, data quality issues, real-time analysis demands, measuring ROI, and dealing with vast amounts of unstructured data.

8) What are different social media analytics tools? What is the purpose of each?

→ Social media analytics tools include Hootsuite, Buffer, Sprout Social,

Brandwatch, and Talkwalker, each serving purposes like social listening, sentiment analysis, social media monitoring, and influencer identification.

9) Explain social media analytics cycle?

→ The social media analytics cycle involves five steps: goal setting, data collection, data analysis, insights generation, and action implementation.

10) What is the need of social media analytics?

→ Social media analytics is needed to understand customer preferences, monitor brand reputation, track competitors, identify market trends, and measure the effectiveness of marketing campaigns.

Module 2

1) 1. What is Node, edge, tie strength in social media network?

→ Node represents a person or entity, edge is a connection between nodes, and tie strength measures the intensity or closeness of the relationship in a social media network.

2) What are different social network measures?

→ Different social network measures include degree centrality, betweenness centrality, closeness centrality, and clustering coefficient.

3) How to represent social network? / what is adjacency matrix/ adja

→ Social networks can be represented using an adjacency matrix, where rows and columns represent nodes, and the entries indicate the presence or absence of edges between nodes.

4) What is singleton, Dyad, Triad?

→ Singleton is a node with no connections, Dyad is a pair of nodes with a connection, and Triad is a group of three nodes with connections.

5) What are 3 different types of graphs / (directed, undirected, weighted Graphs?)

→ Three types of graphs are directed (edges have a direction), undirected (edges have no direction), and weighted (edges have a weight or strength).

6) What is clique in social network?

→A clique in a social network is a subset of nodes where every node is directly connected to every other node.

7)What are egocentric networks? Draw egocentric network of degree 2, 1.5 for any given graph.

→Egocentric networks focus on a single node and its immediate connections, and drawing egocentric networks involves showing connections up to a certain degree or level.

8)What is difference between strongly connected and weakly connected graphs

→Strongly connected graphs have a path between every pair of nodes, while weakly connected graphs may have paths only in one direction.

9)What is difference between bridge and hub?

→A bridge is an edge whose removal would disconnect the graph, while a hub is a node with many connections.

10)Compare text analytics with action analytics

→Text analytics deals with analyzing textual data, while action analytics involves analyzing actions or behaviors within a network.

11)Explain how to calculate Degree centrality, Closeness centrality,Betweenness centrality

→Degree centrality is the number of connections a node has, closeness centrality measures how close a node is to all other nodes, and betweenness centrality measures the number of shortest paths a node lies on.

12)What is density of a node? How to calculate it?

→density of a node tells you how connected you are compared to how connected you could potentially be.

13)What is connectivity of a network? How to calculate it?

→Connectivity of a network measures how well nodes are connected to each other, typically calculated using measures like density or average degree.

14)Define Centralization, how to calculate it?

→Centralization in a network measures how much importance is concentrated in just a few points, rather than being spread out evenly among all the points.

15)what is regular graph? random graph?

→A regular graph has every node having the same degree, while a random graph has connections between nodes occurring randomly.

16)what is small world?

→Small world refers to networks where most nodes are not directly connected, but it's possible to reach any node through a small number of steps.

17)Explain different types of social network visualization techniques?

→Social network visualization techniques include node-link diagrams, matrix plots, heatmaps, and force-directed layouts.

18)What is tie strength and trust and how it is used in social network analysis?

→Tie strength represents the intensity or quality of a relationship, while trust reflects the confidence or reliability in that relationship, both used in analyzing social networks.

19)Give example of weak tie and strong tie?

→An example of a weak tie is an acquaintance, while a strong tie is a close friend or family member.

20).What are common social media networks?

→

Friendship network

Follow-Following Network,FAN Network,Group Network , Professional network, Friendship network

21)What are different types of social media network based on structure?

→Different types of social media networks based on structure include implicit/explicit, directed/undirected, and weighted/unweighted networks.

22)Give some example of network analytics tools?

→NodeXL, UCINET, NetMiner, Reach, Mentionmap)

23)

Briefly explain important network-level properties, such as clustering coefficient, density, diameter, average degree, and components.

→clustering coefficient (how interconnected nodes are), density (proportion of actual connections), diameter (longest shortest path), average degree (average number of connections per node), and components (distinct groups of nodes).

Module 3

1)What is social media text analytics? Explain few of its applications.

→Social media text analytics is analyzing text data from social media platforms to extract insights and patterns, with applications including sentiment analysis, trend detection, and customer feedback analysis.

2)what is the need of text Analytics? compare static text with dynamic text, or give examples of

→Text analytics is needed to understand and extract meaningful information from large volumes of text data, where static text refers to unchanging text like articles, while dynamic text refers to constantly updating content like social media posts.

3)3.compare intention mining, concept mining, sentiment analysis,trends mining

→Intention mining aims to understand the underlying intentions or goals expressed in text, concept mining identifies and categorizes concepts or topics in text, sentiment analysis evaluates the sentiment or emotion conveyed in text, and trends mining identifies patterns or trends in text data.

4)Explain four basic purposes of social media text analytics /Explain sentiment analysis/ intention mining / trends mining/ concept mining steps in detail

→The four basic purposes of social media text analytics include sentiment analysis (evaluating sentiment), intention mining (understanding goals), trends mining (identifying patterns), and concept mining (categorizing topics).

5).Explain with example steps in text analytics

→Steps in text analytics involve data collection, preprocessing (cleaning and formatting text), analysis (using algorithms or techniques to extract insights), and interpretation (making sense of the results), illustrated with an example like analyzing customer reviews to understand sentiment towards a product.

6)Give examples of few text analytics tools

→

discovertext, lexalytics, netlytics, LIWC, Voyant etc)

Explain this in one line and in simple language

7) What is social media action analytics?

→ Social media action analytics involves analyzing the actions and behaviors of users on social media platforms, such as likes, shares, comments, and clicks.

8) What is the need for social media action analytics?

→ The need for social media action analytics arises from the desire to understand user engagement, track campaign performance, and optimize social media strategies.

9) Explain a few common social media actions?

→ Common social media actions include likes (thumbs up), shares (reposting content), comments (adding thoughts or feedback), clicks (interacting with links), and follows (subscribing to a profile).

10) Why is it important to measure the actions performed by social media users?

→ It's important to measure social media actions to gauge audience engagement, assess campaign effectiveness, identify popular content, and make data-driven decisions to improve social media marketing strategies.

11)

What is a hyperlink? What are different types of hyperlinks? (Explain in-links, out-links, co-links)

→ A hyperlink is a clickable link on a webpage that directs users to another webpage or resource. Different types include in-links (incoming links to a webpage), out-links (outgoing links from a webpage), and co-links (links between pages that share common content).

12) What is hyperlink analytics? Why is it required? What does hyperlink analysis reveal about the websites?

→ Hyperlink analytics involves analyzing the links on a website to understand user behavior, improve navigation, and enhance SEO. It's required to track website performance, identify popular pages, and optimize link strategies. Hyperlink

analysis reveals insights about website structure, popularity, and relationships with other sites.

13)

What are different types of hyperlink analytics/ explain

i Hyperlink environment analysis 2. link impact analysis 3. social hyperlink analysis

or compare above 3

→

1. **Hyperlink environment analysis:** This looks at where links are placed on a webpage and how they fit into the overall content and design. It helps understand how users interact with links based on their location and context within the page.
2. **Link impact analysis:** This measures how effective links are in getting people to click on them and engage with the content. It helps website owners understand which links are driving the most traffic or conversions.
3. **Social hyperlink analysis:** This focuses on how links are shared and interacted with on social media platforms like Facebook or Twitter. It helps businesses understand how their content spreads across social networks and how people engage with it in those environments.

Module 4

1) Define location analytics.

→ **Location analytics** is the process of analyzing location-based data to gain insights and make decisions.

2) Explain the two main categories of location analytics.

→ The two main categories of location analytics are spatial analysis, which focuses on geographic patterns and relationships, and location intelligence, which involves using location data to make business decisions.

3) What are the sources of location data.

→Sources of location data include GPS devices, mobile phones, IoT devices, social media check-ins, and geographic information systems (GIS).

4)What are the main applications of business data-driven location analytics?

→Business data-driven location analytics is used for market analysis, site selection, logistics optimization, and customer segmentation.

5)What are the main applications of social media data-driven location analytics?

→Social media data-driven location analytics is used for geotargeting, understanding consumer behavior, personalized marketing, and trend analysis.

6)Discuss privacy concerns related to location analytics.

→Privacy concerns related to location analytics include issues with data collection, consent, and potential misuse of personal information, such as tracking individuals without their knowledge or consent.

7)What is the function of a search engine?

→The function of a search engine is to retrieve relevant information from the internet based on user queries.

8)Explain different types of search engines.

→Different types of search engines include web search engines (like Google), vertical search engines (focused on specific topics like shopping or travel), and enterprise search engines (for searching within organizations).

9)Differentiate between local and global search engines.

→Local search engines focus on retrieving results relevant to a specific geographic location, while global search engines provide results from across the internet without geographic restrictions.

10)What is search engine analytics?

→Search engine analytics involves analyzing data related to search engine performance, user behavior, and website traffic.

11)Explain the two main categories of search engine analytics.

→The two main categories of search engine analytics are search performance analytics (measuring search engine rankings, click-through rates, and traffic) and

user behavior analytics (understanding how users interact with search results and website content).

12)What is the purpose of search engine optimization?

→The purpose of search engine optimization (SEO) is to improve a website's visibility and ranking in search engine results, leading to increased organic (non-paid) traffic.

13)What is the purpose of search engine trend analysis?

→Search engine trend analysis helps businesses identify popular search topics, keywords, and patterns to inform content creation, marketing strategies, and product development.

Module 5

1)What is social information filtering , social sharing and social recommendations

→**Social information filtering** is the process of sorting through large amounts of social media content to provide users with personalized information, while **social sharing** involves users distributing content across social media platforms, and **social recommendations** are suggestions made by social networks based on users' interests and behaviors.

2)How social media can be used in crises?

→During crises, like natural disasters or emergencies, social media helps by instantly sharing important updates, distributing vital information, organizing rescue operations, and rallying people to offer help and support.

3)How social media can be used by business/What is the goal of aligning social media analytics with business goals?

→Social media can be used by businesses to increase brand awareness, engage with customers, drive website traffic, generate leads, and boost sales, and aligning social media analytics with business goals ensures that social media efforts contribute to overall business objectives.

4)What is the purpose of social media strategy?

→The purpose of a social media strategy is to outline goals, target audience, content plans, engagement tactics, and performance metrics to guide social media activities and achieve desired outcomes.

5)Explain the steps needed to formulate a social media strategy.

→Steps to formulate a social media strategy include defining objectives, identifying target audience, selecting appropriate platforms, creating content plans, scheduling posts, engaging with followers, and analyzing performance.

6).What are Social Media KPI?

→Social Media KPIs (Key Performance Indicators) are metrics used to measure the success of social media efforts, such as reach, engagement, clicks, conversions, and sentiment.

7)What are some common social media risks?

→Common social media risks include reputation damage, negative feedback, security breaches, privacy violations, and legal issues.

8).Explain the four steps in social media risk management.

→The four steps in social media risk management are identifying risks, assessing their potential impact, developing strategies to mitigate risks, and monitoring and adapting strategies as needed to address emerging threats.

9)Which type of social media analytics you will use for

finding most influential social media nodes -network analytics

finding perception of the product / service by customer - text analytics

finding location of customers - location analytics

which social media platform driving most traffic - hyperlink analytics

which keywords are trendin

g - trending topics analytics

Module 6

1)1. Compare traditional media with social media

→**Compare traditional media with social media:** Traditional media includes newspapers and TV, while social media refers to platforms like Facebook and Twitter; traditional media is one-way communication, while social media allows interaction and sharing.

2)How social media can be used by individual/ organization / government or public sector

→Individuals can connect with friends and share updates; organizations can market products and engage with customers; governments can disseminate information and gather public feedback.

3)What are the limitations of social media analytics

→Challenges include data accuracy, privacy concerns, difficulty in measuring sentiment accurately, and the inability to capture offline conversations.

4)what is privacy ?what is privacy policy of facebook?

→**Privacy** is the right to keep personal information confidential; Facebook's privacy policy outlines how it collects, uses, and protects users' data, including settings to control privacy preferences.