

SOCIAL NETWORK ANALYSIS

Unit wise Important Questions

Unit-1

1. What is Social Network Analysis (SNA), and why is it significant in contemporary society? Discuss its key concepts and goals briefly.
2. Explain the relationship between social media and the formation and analysis of social networks. How have social media platforms facilitated this process?
3. Trace the evolution of social media technologies and their impact on communication. Highlight key milestones in the development of social media platforms.
4. Define "technologies of collaboration" within the context of social media. How do these technologies enable collaborative interactions among users?
5. Discuss the transformation of traditional communication patterns due to the influence of social media. Provide examples of how people use social media for communication and collaboration.
6. What methods and metrics are commonly used to measure social networks? Why is measuring network properties like centrality and density important?
7. Describe the process of mapping social networks and the visual representations used in Social Network Analysis, such as sociograms and network graphs.
8. Explore the concept of modeling social networks. How do mathematical and computational models contribute to understanding network dynamics?
9. Provide real-world applications of SNA, including its use in sociology, marketing, and epidemiology.
10. Explain how insights from Social Network Analysis can inform decision-making processes in various domains.

UNIT-2

1. What is NodeXL, and why is it significant in the context of social network analysis? Discuss its key features and capabilities briefly.
2. How does NodeXL assist in the data collection process for social network analysis? Mention the types of data sources that NodeXL can connect to.
3. Explain the role of layout, visual design, and labeling in network visualization. How can these elements enhance the understanding of social networks?
4. Define network metrics and their importance in social network analysis. Provide an example of a commonly used network metric and its interpretation.
5. Describe the steps involved in data preparation for social network analysis. What challenges and considerations are associated with data cleaning and preprocessing?
6. Discuss the significance of data filtering in network analysis. Explain the filtering options available in NodeXL and their practical applications.
7. How can NodeXL be used to calculate and visualize various network metrics? Provide step-by-step instructions for calculating a specific key metric.

8. What insights can different network metrics offer about a social network? Illustrate how network metrics can help identify central nodes, cliques, or other structural features.
9. Introduce clustering algorithms used in NodeXL for community detection. Highlight the advantages and limitations of these clustering methods.
10. Explain how NodeXL allows users to group nodes within a network for improved visualization and analysis. Provide real-world examples of scenarios where node grouping can be beneficial.

UNIT-3

1. Trace the historical development of email, highlighting its evolution into a critical communication tool in the digital age. Discuss its role in personal and professional communication.
2. Analyze the challenges and opportunities related to email communication, emphasizing privacy and security concerns. How has email contributed to global communication?
3. Explore the impact of email on remote work and virtual collaboration, particularly in light of recent global events.
4. Define thread networks and their relevance in analyzing online communities. Explain the methods and tools used for mapping message boards and email lists for social network analysis.
5. Provide case studies demonstrating how thread networks have been employed to gain insights into online discourse and community interactions.
6. Discuss the ethical considerations and privacy concerns associated with mapping and analyzing thread networks.
7. How can thread network analysis enhance our understanding of online information sharing and community dynamics?
8. Analyze the multifaceted role of Twitter as a platform for conversation, entertainment, and information dissemination.
9. Discuss Twitter's impact on real-time news reporting and its influence on shaping public opinion.
10. Explore the challenges of conducting social network analysis using Twitter data, considering issues related to data volume and real-time nature.

UNIT-4

1. Explain the significance of visualizing Facebook networks in social network analysis. How can it provide valuable insights into user interactions?
2. Discuss the key challenges in collecting and preprocessing Facebook network data for analysis. What ethical considerations should be taken into account?
3. Describe the techniques and tools used to visualize Facebook networks effectively. Provide examples of visualizations that can reveal meaningful patterns.
4. Explore the concept of ego networks in the context of Facebook. How can they be analyzed to understand an individual's connections and influence within their network?

5. Provide case studies demonstrating the application of Facebook network analysis to real-world scenarios, such as identifying influencers or studying information diffusion.
6. Explain the significance of WWW hyperlink networks in web structure analysis and information retrieval. How do they reflect the structure of the internet?
7. Describe the basic components of a hyperlink network, including nodes, edges, and their relationships. How can hyperlink networks be modeled and represented?
8. Discuss the challenges and opportunities associated with web crawling and data collection for building hyperlink networks. What ethical considerations should be addressed?
9. Explain the concept of PageRank as a measure of web page importance within hyperlink networks. How is it computed, and what insights can it provide?
10. Explore the applications of hyperlink network analysis beyond search engine ranking. Provide examples of how it can inform web content organization and recommendation systems.

UNIT-5

1. Trace the evolution of YouTube as a platform for content sharing and social interaction. How has it transformed the way people engage with online video content?
2. Explain the significance of user-generated content on YouTube and its role in shaping digital culture. Discuss the challenges and opportunities it presents.
3. Analyze the contrasting patterns of content interaction on YouTube, including likes, comments, shares, and views. What insights can these patterns provide about audience engagement?
4. Explore the concept of prominence on YouTube. How do algorithms and user behavior influence the visibility of content creators and their videos?
5. Provide case studies illustrating successful content promotion and audience engagement strategies on YouTube. What can we learn from these examples?
6. Define the concept of wiki networks and their significance in collaborative knowledge creation. How do wikis facilitate the collaborative editing of content?
7. Describe the key characteristics of wiki networks, including user contributions, revisions, and discussions. How can these characteristics be analyzed for insights?
8. Discuss the challenges and benefits of open collaboration on wikis. What motivates individuals to contribute to wikis voluntarily?
9. Explore the role of Wikipedia as a prominent example of a wiki network. How has Wikipedia's collaborative editing model shaped the world of online encyclopedias?
10. Provide case studies showcasing innovative uses of wikis in various domains, such as education, research, and documentation. What lessons can be drawn from these cases?