

MIS 48S.01: SPECIAL TOPICS IN SOCIAL MEDIA INTELLIGENCE

Instructor	Mehmet N. Aydın, PhD (sec01)
Course Hours	Tue 10.00-12:50 IB301 Thu 13:00-15:50 IB312
Office	IB (Washburn Hall) Building, 4th floor, Room# 411
Telephone	(212) 359 7181
E-mail	mehmet.aydin@bogazici.edu.tr
Office Hours	Thu 12:00-13:00
Appointment required besides the office hours.	

Course Description:

This course introduces students to the full data science pipeline with a focus on social media intelligence and web-based analytics. It explores how organizations systematically extract actionable insights from user-generated content across platforms such as Instagram, YouTube, and X (Twitter), using modern MIS analytics and platform intelligence tools. A strong emphasis is placed on Online Social Networks (OSN), including their structure, dynamics, and analytical modeling using directed and weighted graphs. Students will work with industry-relevant tools such as Gephi, Orange, Google Analytics, and Semrush to perform data collection, preparation, analysis (including sentiment analysis), and visualization. Through real-world case studies and industry expert contributions, students will gain hands-on experience in identifying social patterns, community structures, and network behaviors such as cliques and clusters. By the end of the course, participants will be equipped with practical skills and analytical thinking needed to understand and leverage social media intelligence in real-world contexts.

Course Objectives:

The overriding objective is to provide students with exposure to the theory and practice of social media and web analytics. The course provide students with ability to describe end-to-end process for social media intelligence. That is, by utilizing analytic methods students will learn to how to collect, analyze user generated contents on social and web platforms. Various analytics tools including third party analytic solutions for Youtube, Instagram, X. For web and mobile analytics GA4.0, Yandex Metrica will be employed. As part of social media analytics, a particular emphasis is to be online social networks (OSN). Dynamics and Structure of OSN will be examined for basic types of networks including directed, weighted graphs, Various tools (e.g. Gephi) will be used to demonstrate how to deal data preparation and visualization issues. Characteristics and social patterns for modeling OSN in terms of community analysis, cliques, and network resilience are to be examined further. Most common social applications (e.g., facebook as ego-centric network, email information network as communication networks, twitter as micro blocking application) are examined.

Textbook: (Mandatory)

- Seven Layers of Social Media Analytics, Khan G. ISBN: 1507823207
- Web Analytics 2.0, Avinash Kaushik, Wiley Publishing, ISBN: 978-0-470-13065-0
<https://www.kaushik.net/avinash/>

In addition to the textbook we shall use case studies and some chapters from Analyzing Social Media Networks with NodeXL: Insights from a Connected World, ISBN-13: 978-0123822291

Grading Scheme:

The final mark and grade will be awarded on the following bases;

Midterm Exam	40 %
Final	60 %
<i>Total</i>	<i>100 %</i>

Weekly Program:

The instructor reserves the right to modify this preliminary schedule at his/her discretion.

Week	Topics to be covered
1	Introduction to Social Media /Web Analytics
2	Intelligence Metrics, Measurements, Tools (GA4.0, Yandex Metrica, Samrush)
3	Social Media Text Analytics (Sentiment, Topic Modeling) Tool: Orange Data Mining Guest Speaker for Orange Data Mining
4	Social Media Behavior Analytics (Intention, Stance) Youtube User generated content Guest Speaker for YouTube
5	Midterm Social Media Intelligence and Networks Analysis (Gephi and relevant Python Library-NetworkX)
6	Centrality, Giant Component based SM Intelligence
7	Temporal and Community based Connectedness Intelligence Guest Speaker: Real-world Application

(* may change w.r.t. faculty decision)
