

TIGP SNHCC 2024 Fall Syllabus

Introduction to Social Networks (DM)

Place: Room 107, New Building, IIS, AS / Webex

Time: 9:00-12:00 Thurs

Chair: Dr. Yi-Shin Chen

Outline: The objective of this course is to assist students to understand the major concepts involved in social network analysis. Through lectures and lab assignments, students can obtain the ability to conduct research studies related to social networks. The subjects in this course are divided into the following themes:

- Introduction to graph theory
- Graph analysis: community detection, and graph embedding
- Social network analysis: link prediction and privacy in social networks
- User profiling and recommendation systems in social networks
- Text mining and analysis in social networks

References:

- Social Network Data Analytics, Charu C. Aggarwal (Ed.), Springer 2011
- Data Mining: Concepts and Techniques, J. Han, M. Kamber, and J. Pei, 3rd edition, Morgan Kaufmann, 2011.
- Introduction to Data Mining, P.N. Tan, M. Steinbach, and V. Kumar, Addison Wesley, 2006.

TA: Office hours: by appointment

Grades: Exam 40%; Homework 40%; Paper Presentation 20%

For the most updated syllabus, please visit <https://tigpsnhcc.iis.sinica.edu.tw/course.html#s1>

Week	Date	Topics/Brief Description	Lecturers
1	2024/09/05	Class Introduction + Overview of DM 【Webex】	Yi-Shin Chen
2	2024/09/12	Introduction to Graph Theory (I)	Mi-Yen Yeh
3	2024/09/19	Introduction to Graph Theory (II)	Mi-Yen Yeh
4	2024/09/26	Social network analytics (I)	Mi-Yen Yeh
5	2024/10/03	Social network analytics (II) + Lab1	Mi-Yen Yeh
6	2024/10/10	Double Tenth Day (no class)	
7	2024/10/17	Social Network Paper Presentation (I) 【Webex】	Yi-Shin Chen
8	2024/10/24	Link Prediction 【Webex】	Yi-Shin Chen
9	2024/10/31	Text Mining in Social Networks (I) 【Webex】	Yi-Shin Chen
10	2024/11/07	Text Mining in Social Networks (II) 【Webex】	Yi-Shin Chen
11	2024/11/14	Social Network Paper Presentation (II) 【Webex】	Yi-Shin Chen
12	2024/11/21	Data Science Applications (I)	Ming-Feng Tsai
13	2024/11/28	Data Science Applications (II)	Ming-Feng Tsai
14	2024/12/05	Data Science Applications (III)	Ming-Feng Tsai
15	2024/12/12	Lab2: Python Tools for Data Science Applications	Ming-Feng Tsai
16	2024/12/19	Final Exam	