

TIGP SNHCC 2017 Fall Syllabus

Data Mining in Social Networks (DM)

Place: Room 108, Old Building, IIS, AS
Time: 9:00-12:00 Thurs
Chair: Dr. M. K. Shan
Outline: In this course, the following topics will be presented and discussed: social media analysis, blogs and friendship network analysis, email and messaging analytics, influence spreading and viral marketing, social reputation and trust, user profiling and recommendation systems, social media searches, expertise and authority discovery, community identification, link prediction, collaborative data analysis, and data mining with social factors.
Textbook: Social Network Data Analytics, Charu C. Aggarwal (Ed.), Springer 2011
Reference: 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: TBA **Office hours:** by appointment
Grades: Exam I 30%, Exam II 30%, Project Proposal 10%, Project 30%

| Week | Date | Topics/Brief Description | Lecturers |
|------|-------------------------|--|---------------|
| 1 | 2017/09/14@GRC | Introduction to Social Network Mining | Man-Kwan Shan |
| 2 | 2017/09/21 | Review of Data Mining Techniques: Frequent Pattern Mining, Clustering | Man-Kwan Shan |
| 3 | 2017/09/28 | Review of Data Mining Techniques: Classification, Dimensionality Reduction | Man-Kwan Shan |
| 4 | 2017/10/05 | Graph Essentials and Network Measures | Mi-Yen Yeh |
| 5 | 2017/10/12 | Social Network Properties and Network Models | Mi-Yen Yeh |
| 6 | 2017/10/19 @CITI 124 | Community Analysis (I): Community Detection | Mi-Yen Yeh |
| 7 | 2017/10/26 | Community Analysis (II): Community Evolution and Evaluation | Mi-Yen Yeh |
| 8 | 2017/11/02 | Exam I | |
| 9 | 2017/11/09 | A Survey of Link Prediction | De-Nian Yang |
| 10 | 2017/11/16 | Privacy in Social Networks: A Survey | De-Nian Yang |
| 11 | 2017/11/23 | Text Mining in Social Networks | De-Nian Yang |
| 12 | 2017/11/30 | Python Tools for Social Network Mining | Man-Kwan Shan |
| 13 | 2017/12/07 | Project Proposal | Yi-Shin Chen |
| 14 | 2017/12/14 | Chapter 7 A Survey of Models and Algorithms for Social Influence Analysis | Yi-Shin Chen |
| 15 | 2017/12/21 | Chapter 16 An Overview of Social Tagging. | Yi-Shin Chen |
| 16 | 2017/12/28 | Exam II | |
| 17 | 2017/01/04 | Final Project Progress Report | Yi-Shin Chen |
| 18 | 2017/01/11 | Project Presentation | DM Faculty |

