2014 Workshop on Mining and Analyzing with Graphs (MAG)

Introduction

There is a great deal of interest in analyzing data that is best represented as a graph. Examples include the WWW, social networks, biological networks, communication networks, transportation networks, energy grids, multimedia, and many others. These graphs are typically multi-modal, multi-relational and dynamic. In the era of big data, the importance of being able to effectively mine and analyze from such data is growing, as more and more structured and semi-structured and non-structure data is becoming available. The workshop serves as a forum for researchers from a variety of fields working on mining and analyzing from graphs to share and discuss their latest findings.

There are many challenges involved in effectively mining and analyzing from this kind of data, including:

- Understanding the different techniques applicable, including graph mining algorithms, graphical models, latent variable models, matrix factorization methods and more.
- Dealing with the heterogeneity of the data.
- The common need for information integration and alignment.
- Handling dynamic and changing data.
- Addressing each of these issues at scale.

Traditionally, a number of subareas have contributed to this space: communities in graph mining, learning from structured data, statistical relational learning, inductive logic programming, and, moving beyond subdisciplines in computer science, multimedia data mining, social network analysis, and, more broadly network science.

Call for Papers

2014 Workshop on Mining and Analyzing with Graphs (MAG)

July 21, 2014 - Harbin, China
(co-located with WASA 2014)

This workshop is a forum for exchanging ideas and methods for mining and analyzing with graphs, developing new common understandings of the problems at hand, sharing of data sets where applicable, and leveraging existing knowledge from different disciplines. The goal is to bring together researchers from academia, industry, and government, to create a forum for discussing recent advances graph analysis. In doing so we aim to better understand the overarching principles and the limitations of our current methods, and to inspire research on new algorithms and techniques for mining and analyzing with graphs.

To reflect the broad scope of work on mining and analyzing with graphs, we encourage submissions that span the spectrum from theoretical analysis, to algorithms and implementation, to applications and empirical studies. In terms of application areas, the growth of user-generated content on blogs, microblogs, discussion forums, product reviews, multimedia, etc., has given rise to a host of new opportunities for graph mining in the analysis of social media. Social media analytics is a fertile ground for research at the intersection of mining graphs and text. As such, this year we especially encourage submissions on theory, methods, and applications focusing on the analysis of social media.

Topics of interest include, but are not limited to:

Algorithms and methods:

- Graph mining
- Kernel methods for structured data
- Probabilistic and graphical models for structured data
- (Multi-) Relational data mining
- Methods for structured outputs
- Statistical models of graph structure
- Combinatorial graph methods
- Spectral graph methods
- Semi-supervised learning, active learning, transductive inference, and transfer learning in the context of graph
- Web mining algorithms for clickstreams, documents and search streams

Applications and analysis:

- Analysis of social media

- Social network analysis
- Analysis of biological networks
- Multimedia data modeling
- Large-scale analysis and modeling
- Multimedia (Image, Video and Audio...) data mining
- Security and privacy management

We invite the submission of regular research papers (6-8 pages) as well as position papers (2-4 pages). Authors whose papers are accepted to the workshop will have the opportunity to participate in a poster session, and some set may also be chosen for oral presentation.

Key Dates

Paper submission - June 6, 2014

Author notification - June 25, 2014

MAG 2014 Workshop - Aug 11, 2014