SAE: A General Analytic Engine for Social Networks

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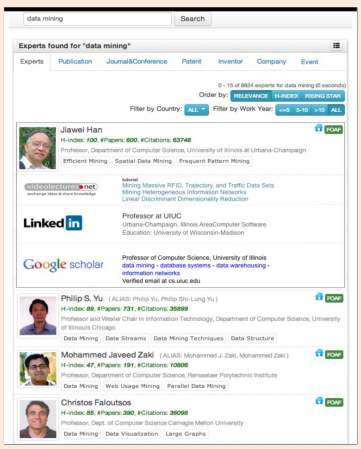
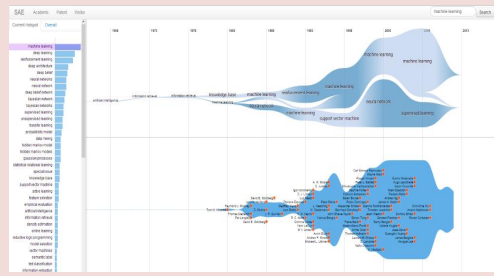
SAE supports large networks with billions of nodes using novel analytic algorithms.
SAE supports modeling and predicting user behaviors across multiple networks.
SAE supports various social networks and can be very easy to apply to a new social networking data.

Integrated Entity Search



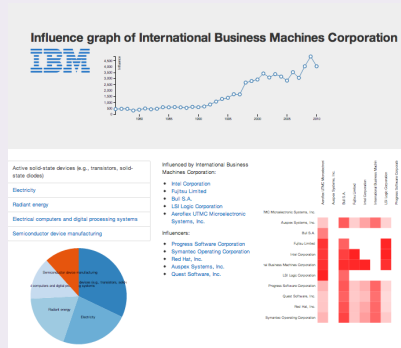
1) Information of a chosen individual in different online social networks.

Topic Evolution Analysis



1) Documents and organizations in each network relevant to the selected topic.
2) A selected topic and its flow path will be highlighted

Social Influence Analysis



1) Influence strength of an individual over time.
2) Individuals who influence each other on a specific topic.

3 Applications

Integrated Entity Search | Topic Evolution Analysis | Social Influence Analysis

Social Analytic Platform

1 **Social Network Analysis**
- Social Influence Analysis
- Social Tie Analysis
- Information Diffusion Analysis

Distributed Computation Engine

2 **Distributed Machine Learning**
- Statistical Topic Model
- Factor Graph Model

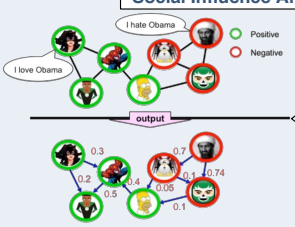
Graph Database

Data Cleaning | Entity Extraction | Data Integration

Distributed Graph Storage

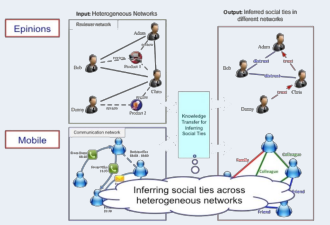
Social Network Analysis Framework

Social Influence Analysis



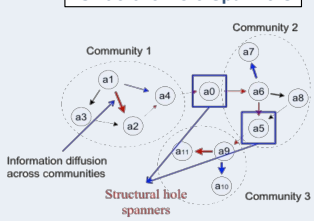
1) Existence test of social influence
2) Quantitative measure
3) Influence applications

Social Tie Analysis



1) Driving force of social tie formation
2) Inferring type of social ties

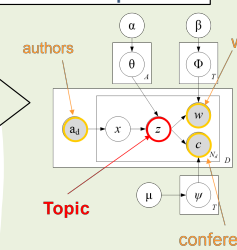
Structure Hole Spanners



1) Discover structural hole spanner
2) Modeling effect of structural hole on information diffusion

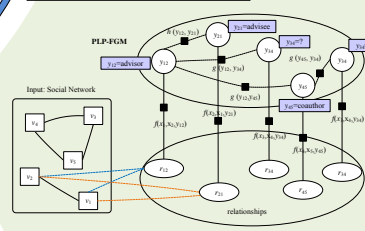
Distributed Machine Learning Framework

Probabilistic Topic Model



Distributed topic model used to extract hidden topics from textural materials of a social network

Factor Graph Model



Distributed factor graph incorporates the social analysis results for modeling and predicting the dynamics in the social network

Heterogeneous Networks

AMiner | flickr

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