Faculty and Research Interests

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Education:

Ph.D., Electrical Engineering, NTU

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Assistant Professor, Dept. of Computer Science and Information Engineering, NTUST

Research Interests:

Data Mining, Data Stream Management, Bioinformatics

Research Topics:

- **Data Mining**
  - **LF-CARS: a Loose Fragment-based Consensus Clustering Algorithm with a Robust Similarity**: Many existing clustering methods focus on different single criterion, and it is difficult to determine which algorithm is better in different applications. Consensus clustering algorithms provide a chance to get a better and robust solution by combining original clustering results which are created from different clustering algorithms.

- **Data Mining with Cloud Computing**
  - **An Efficient DBSCAN Clustering Algorithm Based on Cloud Computing**: Many well-known algorithms face the scalability problem with the increasing amount of data, but they cannot be improved by cloud computing directly because the frameworks are not suitable for the cloud computing. DBSCAN is also one of these algorithms, and we propose the DBSCAN-MR algorithm, which is a Map/Reduce-style algorithm for DBSCAN.

- **Social Network Mining**
  - **System of Sentiment Analysis for Social Media Data**: Text mining in real microblogging applications is very useful for users or managers to make decisions, but micro-blog posts are usually very short and colloquial. Traditional opinion mining algorithms do not work well in such type of text. Therefore, we propose a system for sentiment analysis in real microblogging applications.

- **Data Stream Mining**
  - **An Ensemble Learning Approach for Data Stream with Concept Drift and Recurring Class Problem**: Concept drift is an important issue while analyzing non-stationary distribution data in data stream mining. The changing of the distribution need to be detected or the mining result will become worse. We propose two new weighting mechanisms in order to adapt to current concept quickly.

- **Privacy preserving**
  - **Hiding Dynamic Sensitive Association Rules in Incremental Data**: The issues of privacy acquire more attention today because of the intense competition of business. Association rule mining helps us to find more useful information from data, but it may cause some privacy problem. Therefore, hiding sensitive association rules is an important research field, and we propose a framework to protect dynamic sensitive association rules in incremental environment.