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Research Area: Data and Knowledge Engineering - Data Mining, Machine Learning, and Databases

- Data-driven knowledge discovery, data processing and management for non-traditional data such as
 - Spatial/Temporal/Spatio-temporal data
 - Graph/Network data, Scientific data
- Location-based computing, services, and Information
- Data Science applications public safe, public health, medical, life science, education, business, and so on.
- Big Data analytics and management

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Recent Works on Big Data Analytics

- Spatial association pattern mining methods for Spatial Big Data on
 - Hadoop, MapReduce, NoSQL
 - Hadoop, Spark
- Frequent pattern mining from evolving spatial data Parallel and Incremental Approach in cloud computing environment

Variety Structured Unstructured Semi-structured All the above Terabytes - Satellite data 3Vs of GPS data (Spatial) - Sky survey - Event data Big Data (e.g., traffic Batch speed values Real-time Near-time Streams **Velocity**

Near Future Works

- Spatial/Spatio-temporal pattern mining on GPU
- Data Mining and Machine Learning for streaming data
- Exploration of Polystore systems