

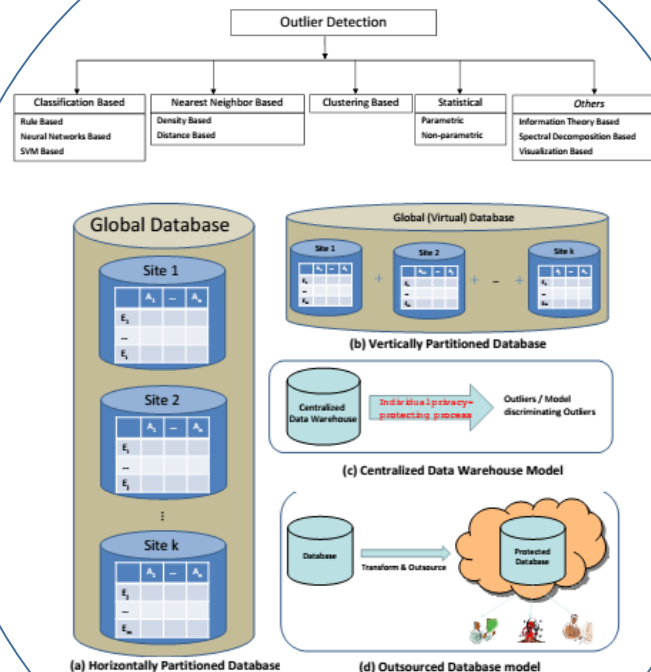
Privacy Preserving Outlier Detection

Challenge:

- Outlier detection is a critical analytics task
- What does it mean to be private?
- If data is distributed, local computation does not suffice
- Scalability is a significant challenge

Solution:

- End-to-end privacy
 - Privacy of process
 - Privacy of results
- Develop solution for centralized data model
- Adapt to distributed model



Scientific Impact:

- Enable Private Outlier Detection
 - Different data ownership models
 - Multi-modal nature of data
- Support tradeoffs of privacy, efficiency, and utility

Broader Impact:

- Advance open science through the joint discovery and analysis of exceptions
- Improve safety and reliability and provide de-facto "defense in depth" by minimal disclosure of information
- Broaden participation in CS research by incorporating topics into summer camps and REU experiences