

Literature Review

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1 Manifold / Representation Learning

- Supervised manifold learning
- Classic approaches
- Graphs
- Neural nets

2 Multiple Instance Learning

- General approaches
- Manifold construction with data imprecision

3 Outlier/ Adversarial Detection

- Definition of robustness and outliers
- Robustness measures
- Outlier detection on manifolds

4 Sensor Fusion

- Fusion using manifolds
- HME, Choquet integral, HMM, and related context-dependent approaches
- Dissimilarity metrics
- Data adjustment/ alignment
- Fusion of raw data/ preprocessed
- Manifold alignment
- (Pick highly cited/ well-known over broad range (this is a large field))