**关键词：group anomaly/global anomaly/collective anomaly**

Our group anomaly detection task: we want to find anomalous groups of points in which each individual point can be normal.

Example:

the Sloan Digital Sky Survey, produce a vast amount of data about galaxies and other celestial objects. It is an important question how to find anomalous clusters of galaxies, where each galaxy in the cluster is normal, but the cluster members together exhibit unusual behavior, i.e., the distribution of the feature vectors in the cluster is different from the distributions of the feature vectors in other clusters, although each feature vector is normal.

reference:

Nonparametric Divergence Estimation with Applications to Machine Learning on Distributions

1Anomaly Detection A Survey-Extended Version