Streaming data are regarded as those datas which flows like a river meaning data comes and go out. There are many different sources in various applications fields where data continuously evolves. For example, sensor, web click bla bla.

The main difference between static data and streaming data is in static data we can save data into memory and in streaming case, we have not opportunity to do that. In static data, the updates are very little and sometimes even not and we can query that as many times as we want but in streaming case, we can only scan the data and analyse those.

The main challenge in streaming data is the number of the dimensions. The data are having with such many dimensions which make it difficult to analyses. There are many different algorithms which work fine for static data but not perform well for the streaming data. For example, principal component analysis (PCA), Linear Discriminant analysis (LDA), Maximum Marginal classifier (MMC). Previous study show that these are not well suitable for the

**IDR/QR: An Incremental Dimension Reduction Algorithm via QR Decomposition**

Dimension reduction are necessary for many database and data mining application mainly for efficient storage and retrieval of high dimensional data. For larger data set it will be better to not store whole data matrix in the memory. More importantly when the new data items arrive the algorithm should constrain the computational cost. The almost all effort for having efficient storage deteriorates with the increment of the dimensions. The solution of this dimensional curse is to reduce the dimension by some means and then apply the multi indexing techniques.

The common way to reduce computationally and time is to have a small chunk of data available over a certain fixed period of time.

One of the main problem find in almost all paper is: it is difficult to design an incremental solution for the eigenvalue problem on the product of scatter matrixes.