LDA is:

* Used as a dimensionality reduction technique
* Used in the pre-processing step for pattern classification
* Has the goal to project a database onto a lower-dimensional space

LDA differs from PCA because in addition to finding the component axes, with LDA, we are interested in the axes that maximize the separation between multiple classes

The goal of LDA is to project a feature space (a dataset n-dimensional samples) onto a small subspace k (where k ≤ n-1) while maintaining the class discriminatory information

Both PCA and LDA are linear transformation techniques used for dimensional reduction. PCA is described as unsupervised but LDA is supervised because of the relation to the dependent variable