Guided Projects Artificial Intelligence & Machine Learning

Guided Projects: Feature Engineering

Speech Classification

Linear Discriminant Analysis or LDA is a dimensionality reduction technique used to reduce the number of dimensions (i.e. variables) in a dataset while retaining as much information as possible. Using LDA based classification, we can find discriminative features for a given audio segment to achieve the task of Automatic Speech Classification such that speech belonging to the same class are close together, but samples from different classes are far apart from each other.

Question:

In order to implement LDA, first generate a dummy dataset (say **IRIS dataset having 4 features**) and the use LDA to decrease the number of **features to one/two**. Now using this modified dataset, try to learn a classifier to test the **performance of LDA** for dimensionality reduction.