Algorithm for LDA :-

Step 1 :- Given the dataset belonging to different classes say class 1 & class 2.

Step 2 :- find / Evaluate Scattering of data points within the matrix (Sw) for classes mentioned in the problem statement.

Step 3 :- find mean values of data set in the classes μ_1 say for class 1 μ_2 for class 2. Use these mean values to solve for Sw matrix

Step 4 :- Compute the matrix S_B [Between class Scatter matrix]. $S_B = (\mu_1 - \mu_2)(\mu_1 - \mu_2)^T$

Step 5 :- To find the best LDA projection vector find highest Eigen value using $|S_W^{-1} S_B - \lambda I| = 0$ & inturn find Eigen vector.

Step 6 :- Use the Eigen vector values to get new projection of data.

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