Name: mahmoud ahmed Mohamed

Report of principal component analysis(pca)

What is Pricncipal Component Analysis?

In a very crude sense, PCA is a **dimensionality reduction technique**. If you're working on a project that has an enormous dataset with multiple features, you might want to reduce some of them. After all, not all are required, and they may unnecessarily increase the training costs of your model.

You would have realised that by reducing the number of features, you may lose out on a bit of accuracy and information, but it sure does simplify the process for you. So in a fundamental sense, PCA will help you reduce the number of training features but still preserve as much as information for you.

Steps Involved:

1. Standardisation of dataset
2. Computation of covariance matrix
3. Calculating eigenvalues and eigenvector
4. Pick the top 'n' eigenvectors
5. Transforming of dataset