



**INDIAN INSTITUTE OF INFORMATION TECHNOLOGY
KALYANI**

**Kalyani, Nadia-741235, West Bengal
(An institute of National Importance)**

Course Title: Machine Learning Lab Paper Code: CSC612 Spring 2025

Assignment 8

Date: 18/03/2025

Due date: 18/03/2025 1 PM

5 Marks

Find out 3 Principle Components from the given 13 features of the **WineComponent.csv** using PCA algorithm. Show all the steps.

1. Calculate the average of all the 13 attributes
2. Calculate the Variances and show the covariance matrix.
3. Calculate the Eigen vectors and Eigen values.
4. Sort the eigen values and take top 3 values.
5. Show the revised values in the 3 dimentions and plot them.