Q2. Compare the performance of this model with the performance obtained in Q1. Explain the outcome.

A: In Question 2, I applied Principal Component Analysis (PCA) to the dataset and retained only the first three principal components for linear regression model.

PCA is a dimensionality reduction technique that aims to capture the most significant patterns in the data with fewer dimensions. By reducing the number of dimensions, we are condensing the information contained in the original features into fewer, new composite features.

Q4. Compare the performance of this model with the performance reported in Q3. Explain the outcome.

A: In Question 4, we introduced L1 regularization to this logistic regression model. Regularization techniques add a penalty to the loss function that the algorithm optimizes, discouraging overly complex models which can lead to overfitting.

Self-reflect

A: During this unit I learnt how the performance of machine learning algorithms is measured and compared. How to use python for model assessment and selection.

Quiz:

Your work has been saved and submitted

Written 08 September, 2023 3:07 PM - 08 September, 2023 3:09 PM • Attempt 1 of unlimited

Your quiz has been submitted successfully, the answer(s) for the following question(s) are incorrect.

Attempt Score	**9 / 10 - 90 %**
Overall Grade (Highest Attempt)	**9 / 10 - 90 %**