**Report for this assignment:**

In evaluating the performance of the logistic regression model for predicting loan labels, we observed promising results. When considering the healthy loans (label 0), the model exhibited remarkable precision at 100%. This indicates that when the model predicted a loan as healthy, it was indeed a healthy loan, minimizing false positives. Additionally, the accuracy of 99% suggests that the model performed exceptionally well in classifying both healthy and high-risk loans. For the high-risk loans (label 1), while the precision remained strong at 85%, there is room for improvement in reducing false positives, as the model misclassified a small percentage of loans as high-risk when they were not.

Subsequently, we conducted an analysis to assess the logistic regression model's performance when fitted with oversampled data. The results showed that for healthy loans, precision remained at a remarkable 100%, highlighting the model's consistent ability to correctly identify healthy loans. For high-risk loans, the precision maintained its 85% rate, indicating that the model still accurately identified the majority of high-risk loans while displaying room for improvement in reducing false positives. Importantly, the accuracy continued to stand at a commendable 99%. Furthermore, in terms of recall, the model utilizing resampled data exhibited favorable outcomes in identifying both healthy and high-risk loans, suggesting that it effectively captured a significant portion of true positives.

In summary, the utilization of oversampled data enhanced the logistic regression model's overall accuracy, particularly in detecting high-risk loans. The model retained its exceptional precision in identifying healthy loans, minimizing the risk of false positives. Although there is room for further improvement in identifying high-risk loans, the model's performance with resampled data underscores its potential to make more accurate predictions in the lending domain, ultimately contributing to better risk assessment and decision-making processes. Further refinements may be explored to fine-tune its performance, potentially reducing the rate of false positives in high-risk loan predictions.