**Summary**

**Model Performance**

The Logistic Regression model demonstrated a high level of accuracy 99.25%, with an exceptional precision and recall for both classes. The model showed:

* **Perfect Precsion and Recall for Non-Default Loans:** The model accurately identifies loans that will not default.
* **High Precision and Recall for Defaulted Loans:** While slightly lower, the precision and recall for defaulted loans ae still robust, indicating effective detection of default risk.

**Justification for Recommendation:**

* **High Accuracy and Reliability:** With an Accuracy of 99.25% , the model reliably distinguishes between defaulted and no-defaulted loans.
* **Balanced Performance:** The model’s balanced precision and recall scores ensure it is not biased towards either class, making it suitable for practical use.
* **Risk Management:** Effective prediction of defaulted loans enables the company to mitigate financial risk by implementing preemptive measures.

**Recommendations:**

I recommend deploying this Logistic Regression model for the company’s loan approval process. The model’s high accuracy and balanced metrics suggest it will be a valuable tool in reducing default rates and enhancing the overall financial health of the company. The use of this model can lead to more informed and data-driven lending decisions, ultimately improving the company’s profitability and risk management strategies.