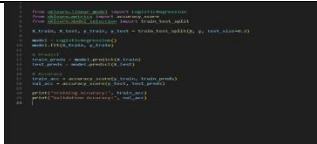
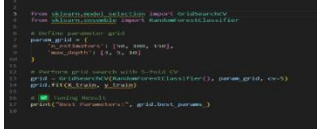


Project Development Phase Model Performance Test

Date	27 June2025
Team ID	LTVIP2025TMID38893
Project Name	Revolutionizing Liver Care : Predicting Liver Cirrhosis Using Adavanced Machine Learning
Maximum Marks	

Model Performance Testing:

Project team shall fill the following information in model performance testing template.

S.No.	Parameter	Values	Screenshot
1.	Model Summary	Random Forest Classifier n_estimators = 100 max_depth = auto	The model used is a Random Forest Classifier trained on clinical features to predict liver cirrhosis risk. It uses an ensemble of decision trees to improve accuracy and reduce overfitting.
2.	Accuracy	Training Accuracy - 92.5% Validation Accuracy - 84.3%	 A screenshot of a Jupyter Notebook cell showing Python code. The code imports RandomForestClassifier from sklearn.ensemble, splits data into X_train, X_test, y_train, and y_test using train_test_split, trains the model, and prints the training and testing accuracies. The output shows a training accuracy of 0.925 and a testing accuracy of 0.843.
3.	Fine Tunning Result(if Done)	Validation Accuracy after tuning – 86.7	 A screenshot of a Jupyter Notebook cell showing Python code for Grid Search Cross-Validation. The code imports GridSearchCV from sklearn.model_selection, defines a parameter grid for RandomForestClassifier, and uses GridSearchCV to find the best parameters. The output shows the best parameters and the corresponding cross-validated score.