Image data set

Dataset name : STL10

Dataset classes

1. airplane
2. bird
3. car
4. cat
5. deer
6. dog
7. horse
8. monkey
9. ship
10. truck

Data samples

Image size 96x96
Number of columns : 13000
Train data : 5000
Test data : 8000

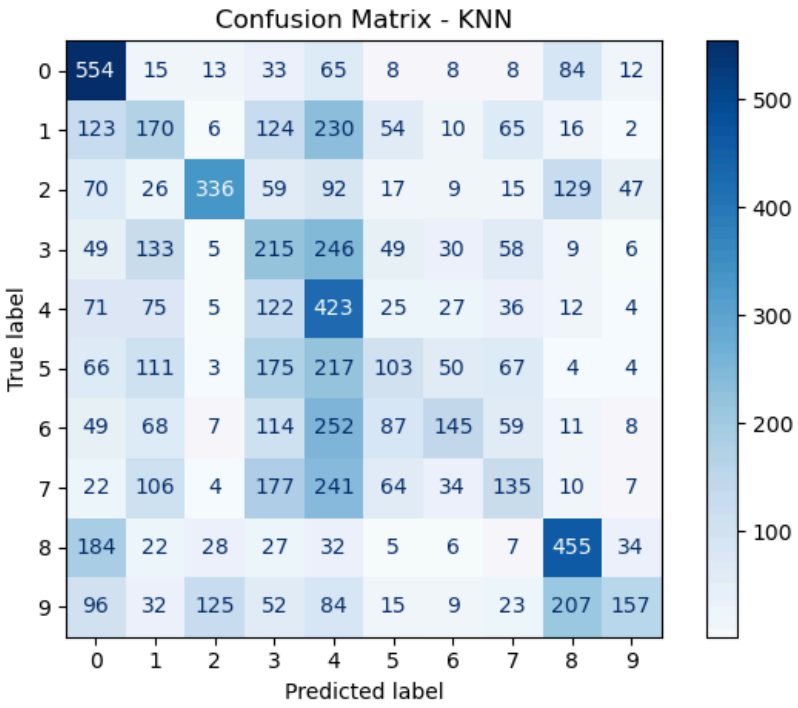
We made two models

1. Logistic Regression model
2. KNN model

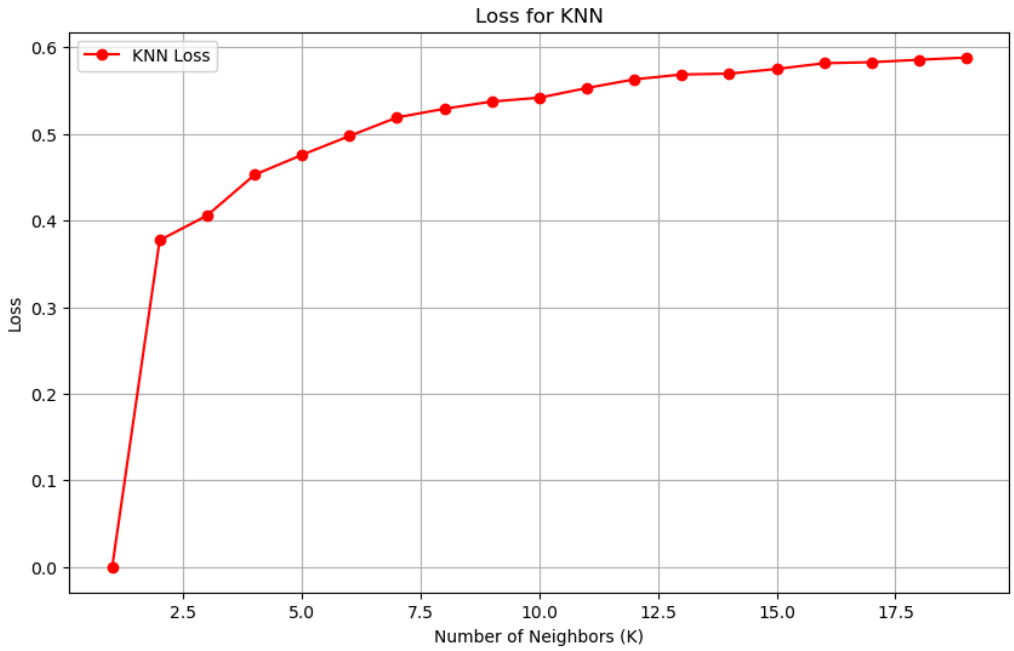
KNN Model

Accuracy: 0.34

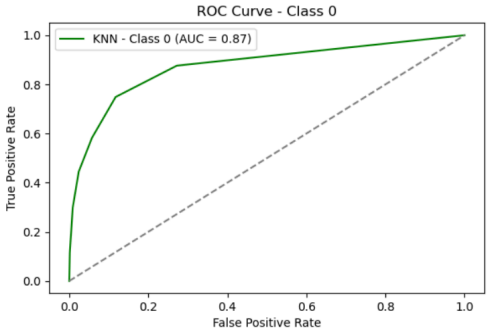
Confusion Matrix

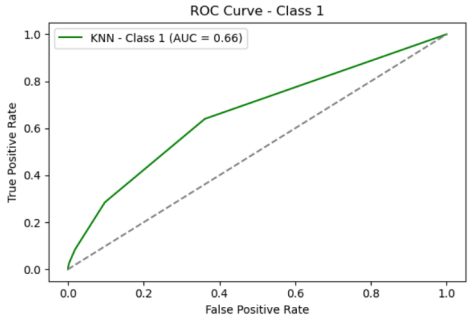


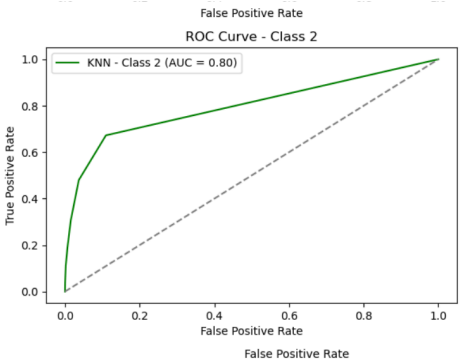
Loss curve

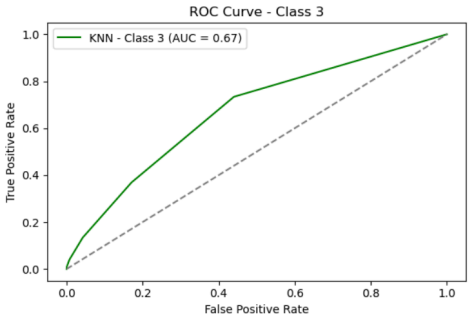


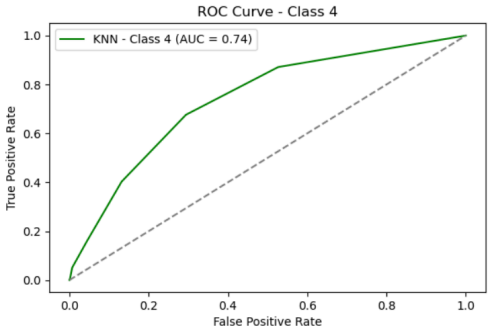
ROC Curve

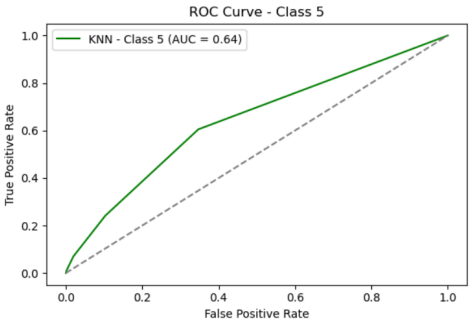


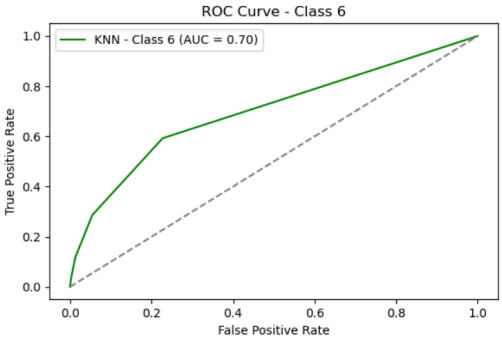


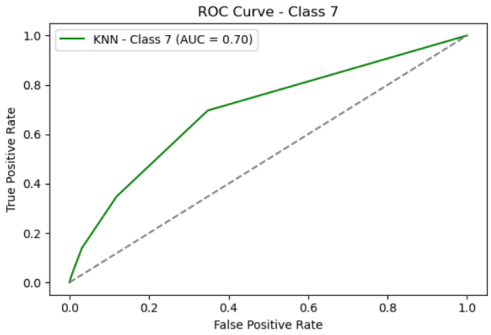


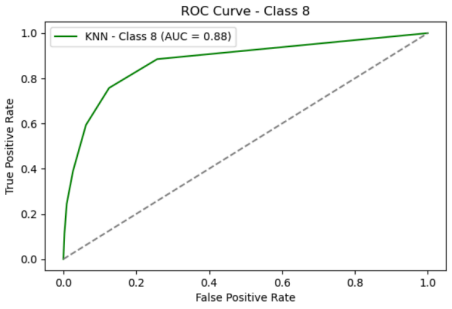




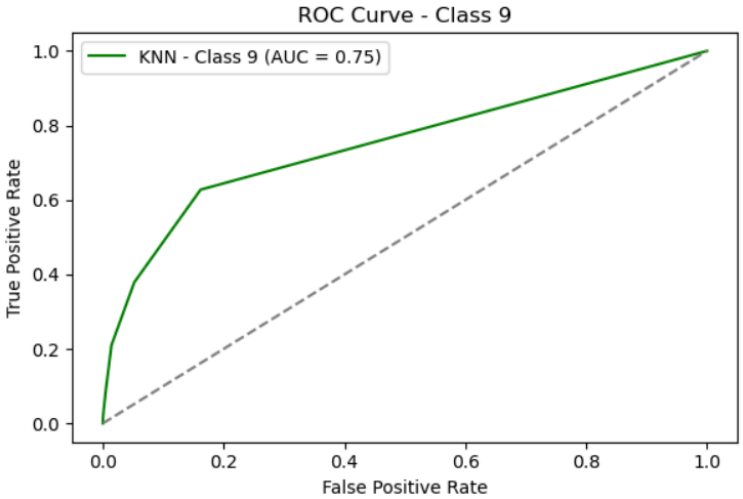






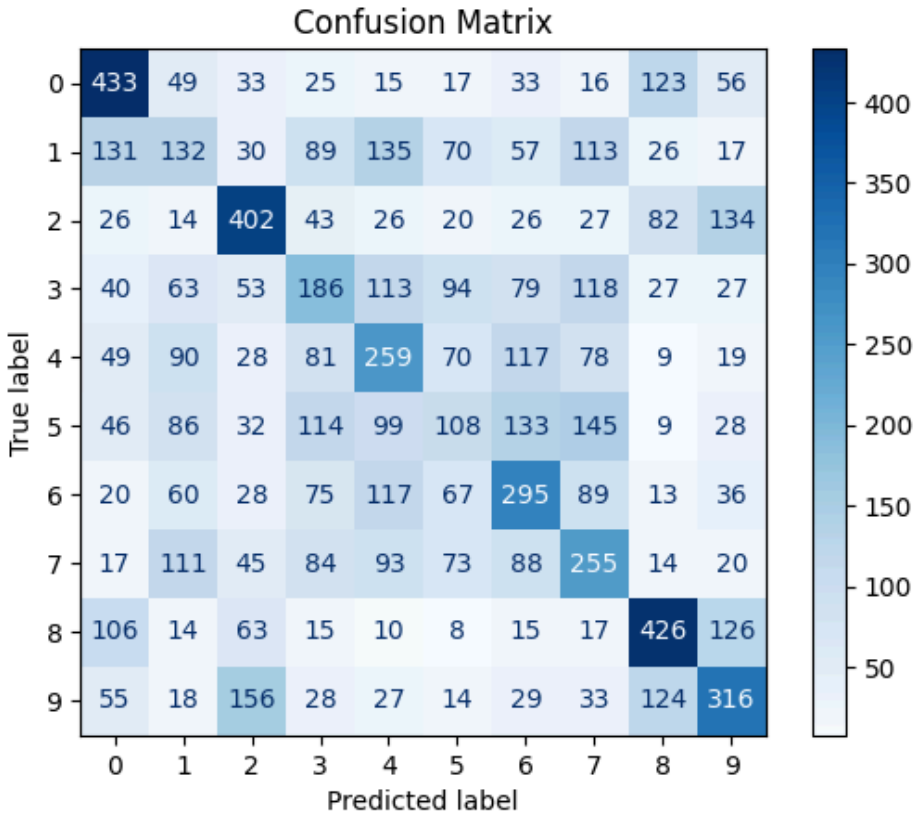


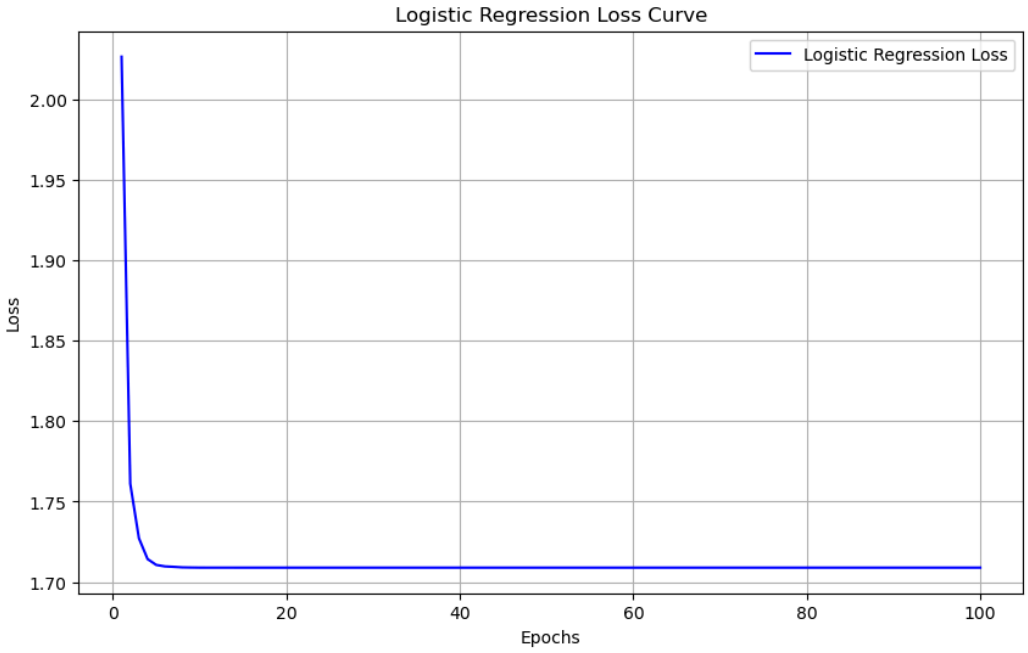
False Positive Rate



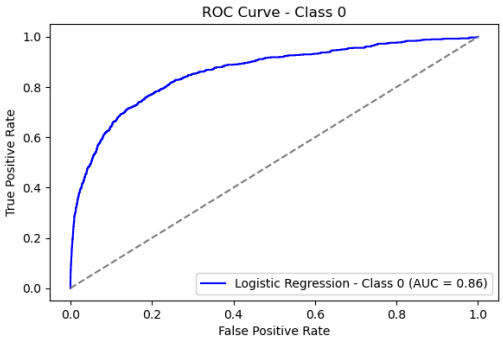
Logistic Regression model

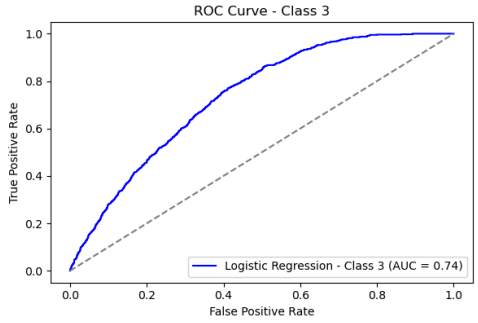
Accuracy: 0.35

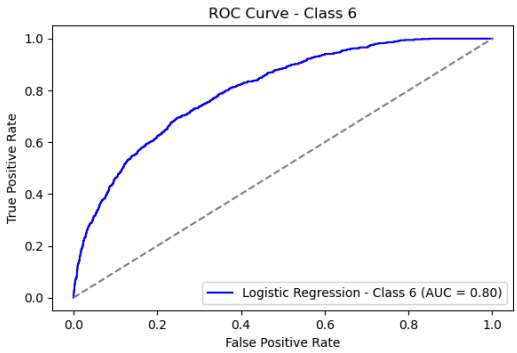


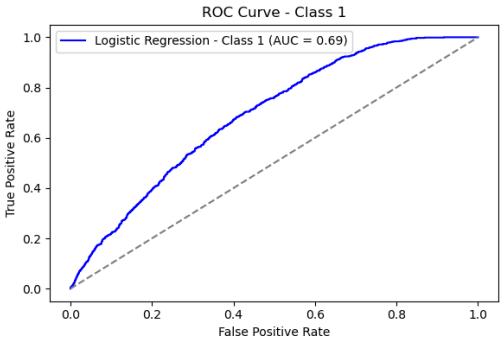


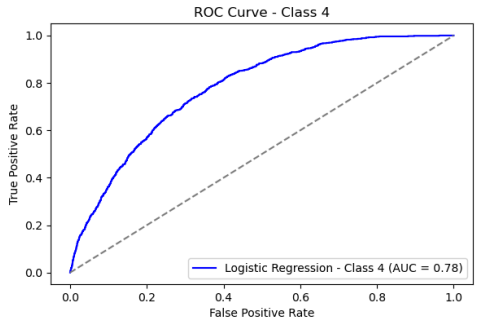
Loss curve

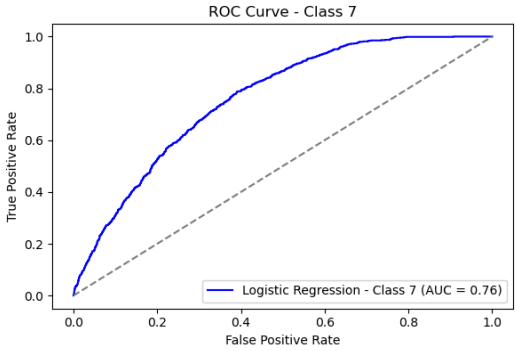

ROC Curve - Class 0
Logistic Regression - Class 0 (AUC = 0.86)
True Positive Rate
False Positive Rate

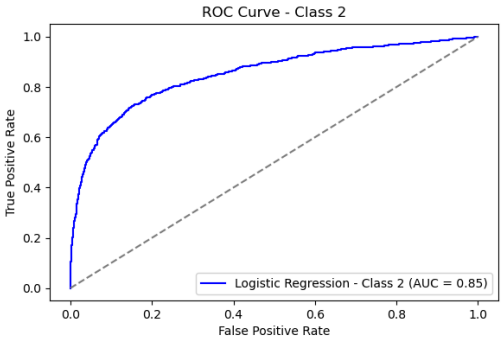

ROC Curve - Class 3
Logistic Regression - Class 3 (AUC = 0.74)
True Positive Rate
False Positive Rate

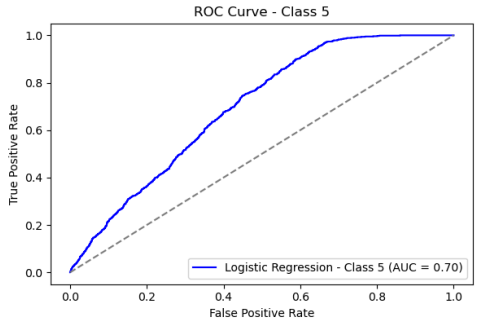

ROC Curve - Class 6
Logistic Regression - Class 6 (AUC = 0.80)
True Positive Rate
False Positive Rate

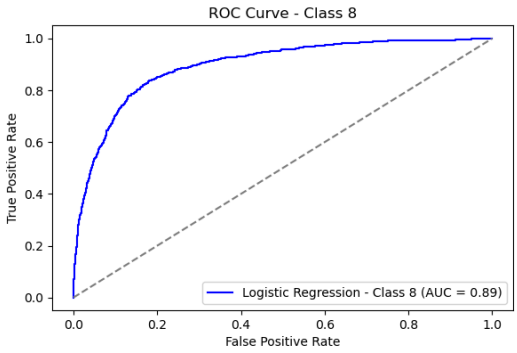

ROC Curve - Class 1
Logistic Regression - Class 1 (AUC = 0.69)
True Positive Rate
False Positive Rate

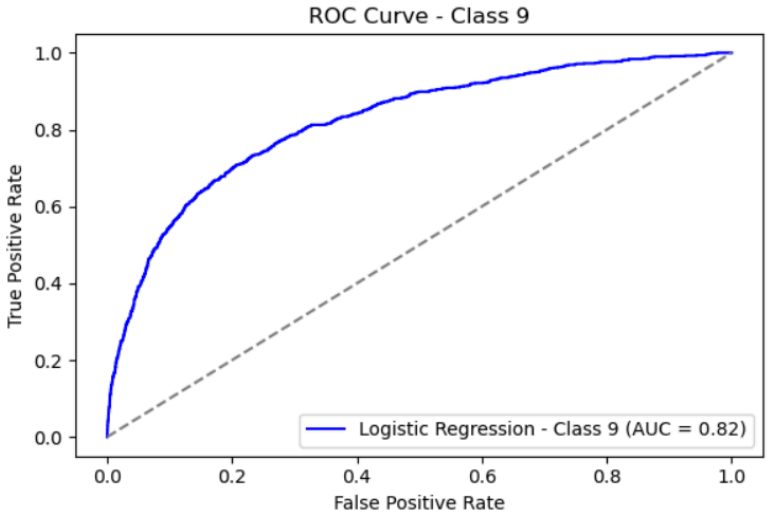

ROC Curve - Class 4
Logistic Regression - Class 4 (AUC = 0.78)
True Positive Rate
False Positive Rate


ROC Curve - Class 7
Logistic Regression - Class 7 (AUC = 0.76)
True Positive Rate
False Positive Rate


ROC Curve - Class 2
Logistic Regression - Class 2 (AUC = 0.85)
True Positive Rate
False Positive Rate


ROC Curve - Class 5
Logistic Regression - Class 5 (AUC = 0.70)
True Positive Rate
False Positive Rate


ROC Curve - Class 8
Logistic Regression - Class 8 (AUC = 0.89)
True Positive Rate
False Positive Rate


ROC Curve - Class 9
Logistic Regression - Class 9 (AUC = 0.82)
True Positive Rate
False Positive Rate

And now we can say Logistic Regression model is better