Summary Report

Introduction

The dataset consists of 150 samples, with each sample containing two features, represented as a two-dimensional array. The samples are divided into three classes. The dataset was generated using the make_blobs function from scikit-learn, with three cluster centers located at coordinates [[2, 4], [6, 6], [1, 9]]. The dataset was split into training and testing sets using an 80-20 ratio.

Methodology

The KNN algorithm was employed to classify the data points into their respective classes. The classifier was implemented using the KNeighborsClassifier class from scikit-learn. Default hyperparameters were used for the KNN algorithm. The training data was used to fit the classifier, and the testing data was used to evaluate its performance.

Accuracy

The KNN classifier achieved a perfect accuracy score of 1.0 on the testing set, indicating that all data points were correctly classified. The predicted labels for the testing set matched the true labels.And a scatter plot was generated to visualize the artificial dataset with three distinct classes.