- 1. Choose a dataset with two features (such as petal length and petal width for the Iris dataset).
- Split the dataset into a training set and a test set. You can use Scikit-learn's train\_test\_split function to do this.
- 3. Implement the Perceptron algorithm in Python using Scikit-learn's Perceptron class.
- 4. Train the Perceptron model using the training set. You can use Scikit-learn's fit method to train the model.
- 5. Test the accuracy of the model on the test set. You can use Scikit-learn's score method to get the accuracy score of the model.
- Visualize the decision boundary of the model by plotting the data points and the separating line. You can use Matplotlib to plot the decision boundary.

This simplified assignment will still cover the key concepts of the Perceptron algorithm, including how to train and test a model, and how to visualize the decision boundary. It will also give students the opportunity to work with a real dataset and apply the Perceptron algorithm to a practical problem.