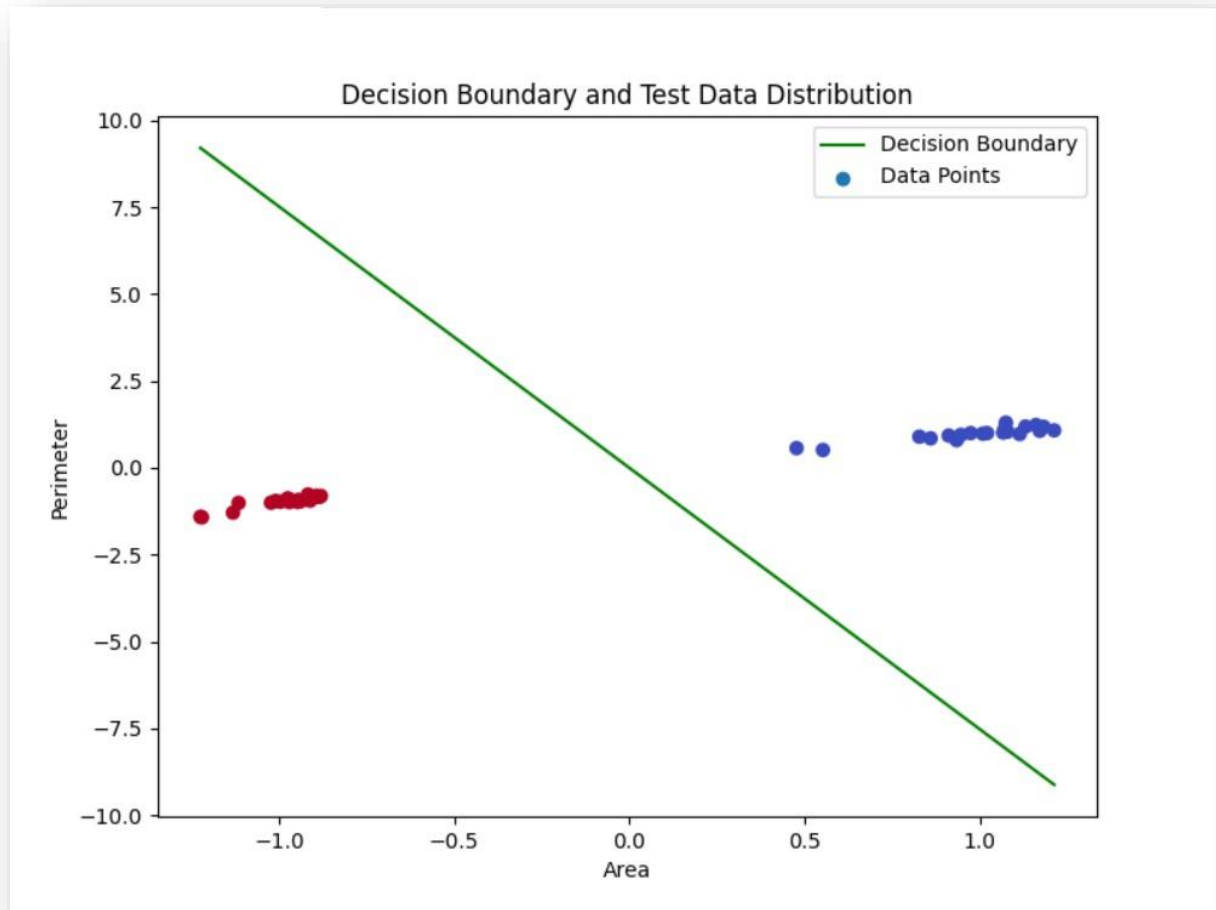| Department	ID	Name
SC	20201700448	عبدالرحمن محمد مهدي عبدالشافي
SC	20201700443	عبدالرحمن محمد الغمري محمد
SC	20201700435	عبدالرحمن حمدي عبدالباري احمد
SC	20201700453	عبدالرحمن مدحت الامام امين
SC	20201700748	محمد نصر زكي مراد
SC	20201700500	علي ابراهيم علي ابراهيم

Single Layer Perceptron Model

- ## Best results for C1 and C2:

Decision Boundary and Test Data Distribution

```
Perceptron Accuracy =  100.0 %
confusion_matrix [[20, 0], [0, 20]]
```

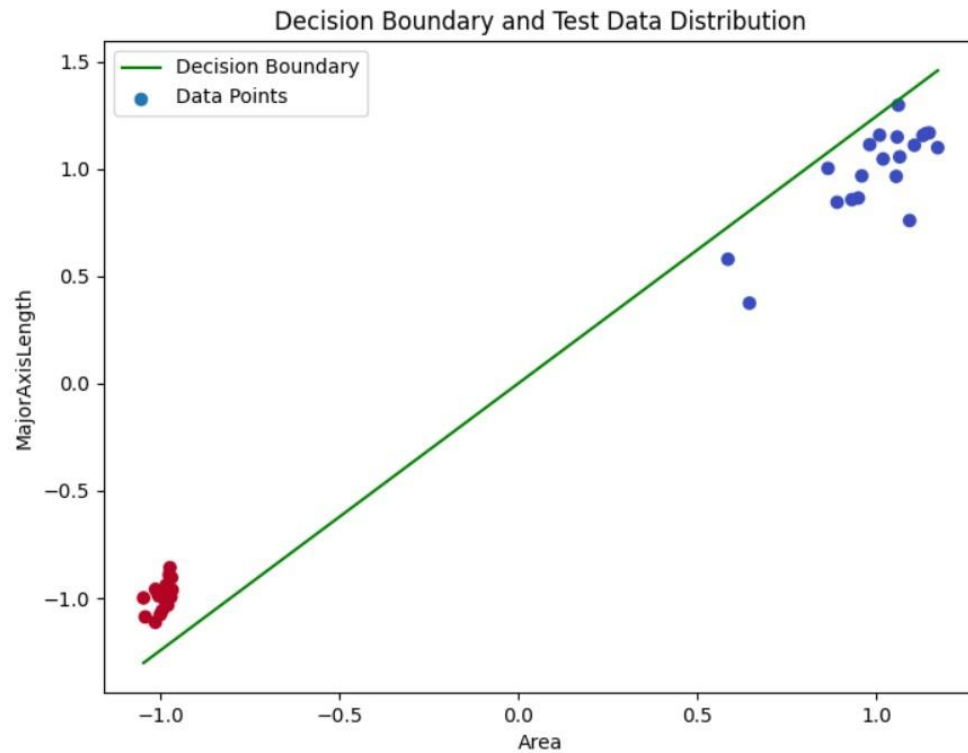- **<u>Best results for C2 and C3:</u>**

Decision Boundary and Test Data Distribution

```
Perceptron Accuracy =  100.0 %
confusion_matrix [[20, 0], [0, 20]]
```
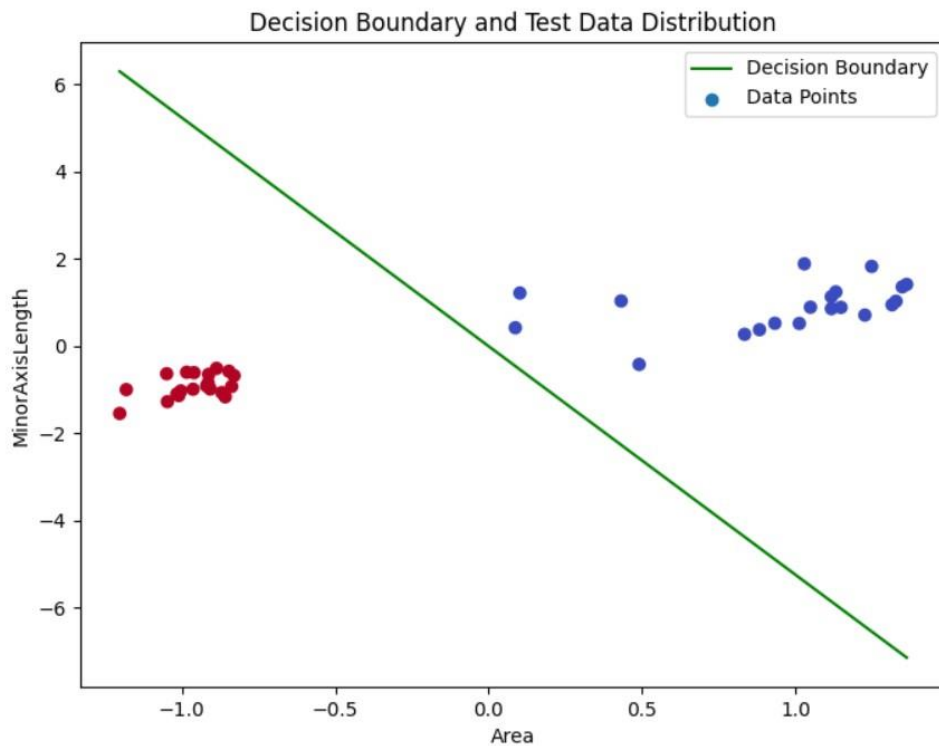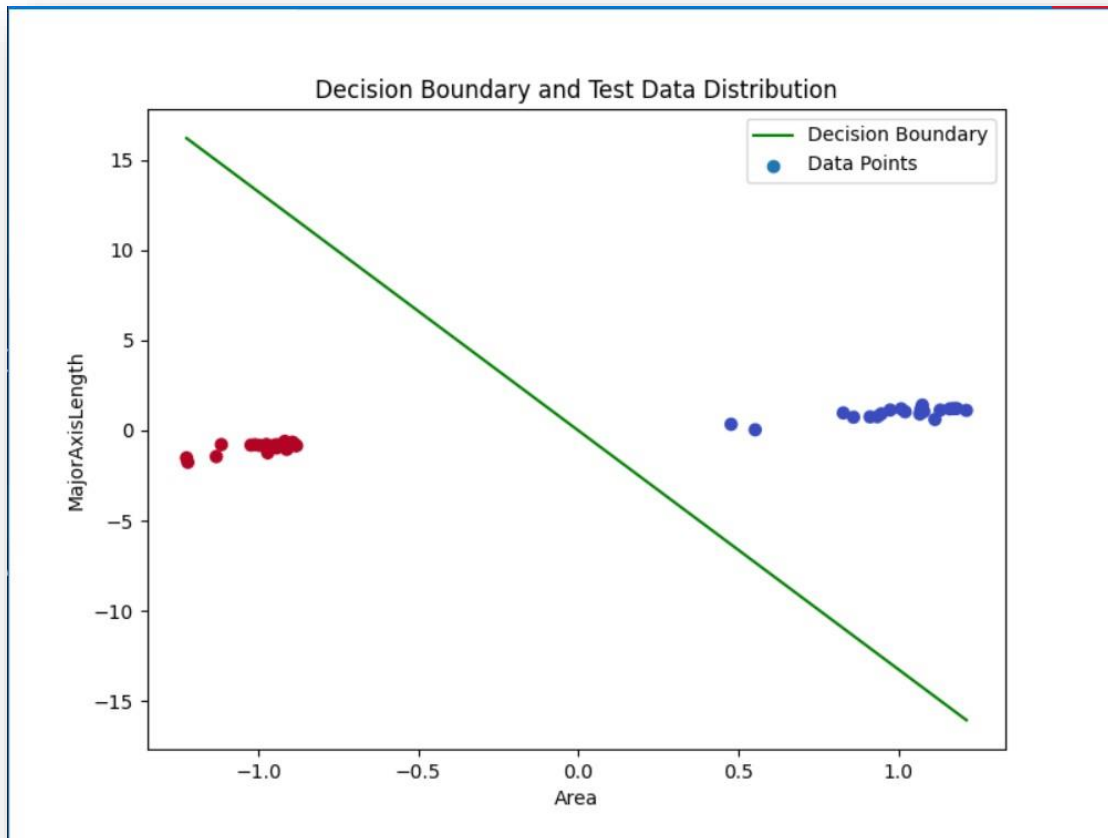
- **Best results for C1 and C3:**


```
Perceptron Accuracy =  100.0 %
confusion_matrix [[20, 0], [0, 20]]
```

Adaline Model

- **Best results for C1 and C2:**

Decision Boundary and Test Data Distribution

```
AdaLine Accuracy =  100.0 %
confusion_matrix [[20, 0], [0, 20]]
```

- ## **Best results for C2 and C3:**

Decision Boundary and Test Data Distribution

```
AdaLine Accuracy =  100.0 %
confusion_matrix [[20, 0], [0, 20]]
```
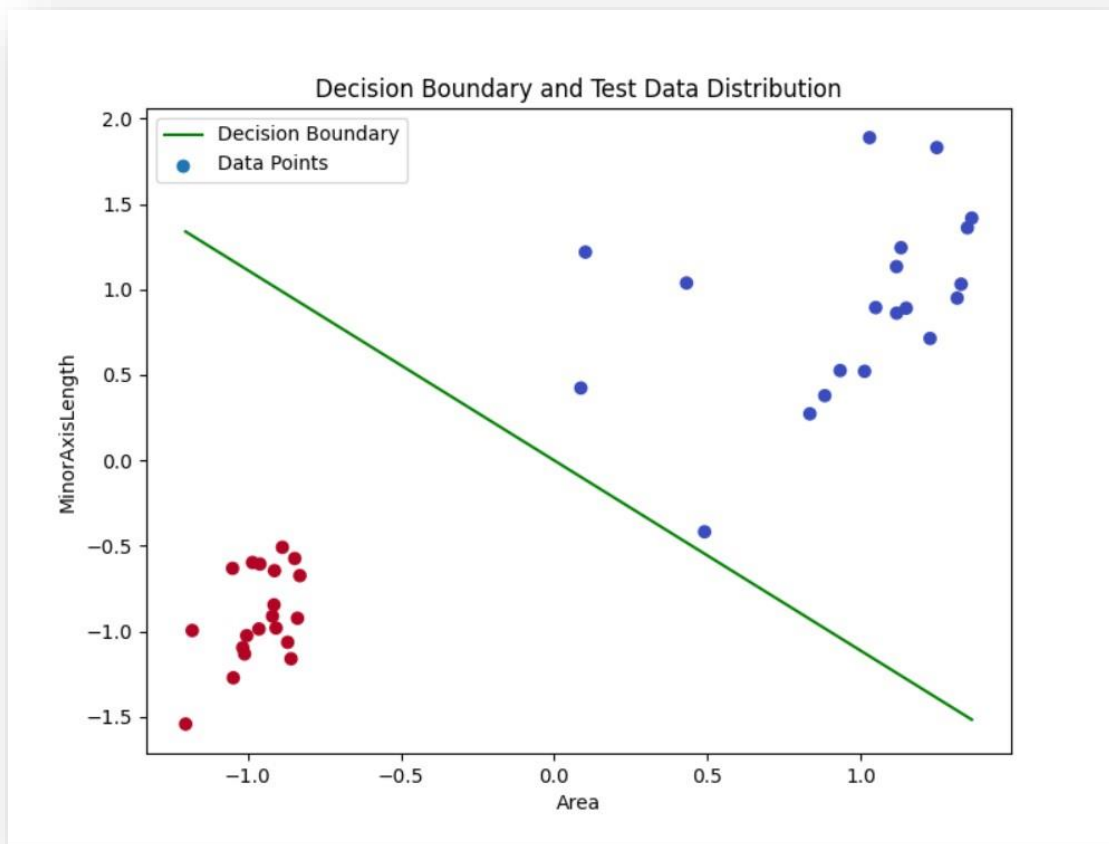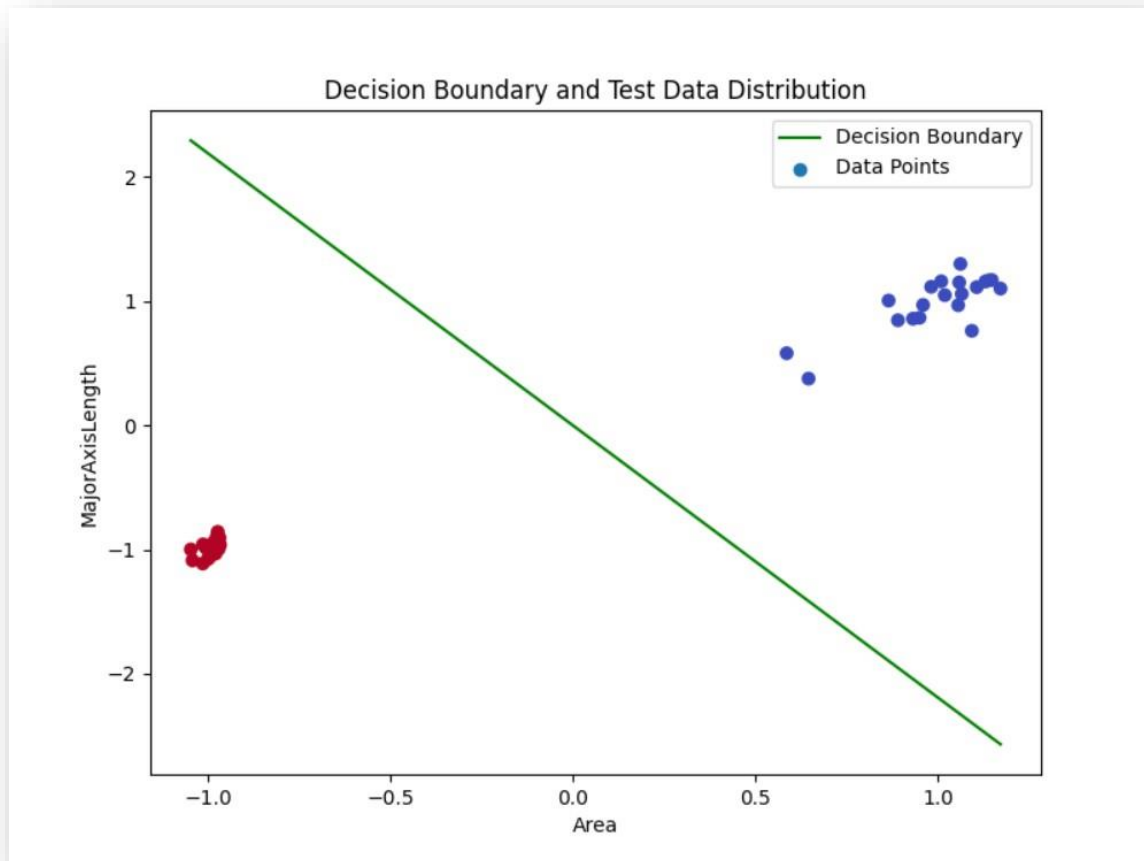
- **Best results for C1 and C3:**


```
AdaLine Accuracy =  100.0 %
confusion_matrix [[20, 0], [0, 20]]
```
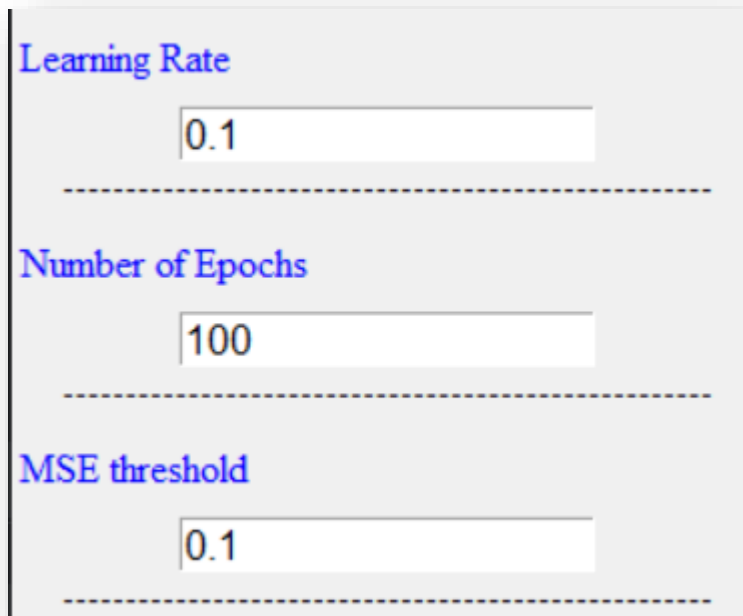
- **Best results for C1 and C3:**

Conclusion

The Best values for each hyperparameter:

Learning Rate

0.1

Number of Epochs

100

MSE threshold

0.1

Through several trials, we concluded that most features yield similar results, however, most notably Area & Perimeter proved the best results and accuracy consistently across the models.