

1:python Linear_Classifiers.py --data simple --algorithm logistic

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PS C:\Users\josia\OneDrive\Desktop\Documents\FileCabinet\College\23-24\IntroToAi\hw4_stuff\HW_4_Programming 4> python Linear_Classifiers.py --data simple --algorithm logistic
number of training data instances: (3, 8)
number of test data instances: (3, 2)
number of training data labels: (8, 1)
number of test data labels: (2, 1)
8
C:\Users\josia\OneDrive\Desktop\Documents\FileCabinet\College\23-24\IntroToAi\hw4_stuff\HW_4_Programming 4\Linear_Classifiers.py:158: DeprecationWarning: Conversion of an array with ndim > 0 to a scalar is deprecated, and will error in future. Ensure you extract a single element from your array before performing this operation. (Deprecated NumPy 1.25.)
    return float(sum(correct)) / len(correct)
Accuracy: training set: 1.0
Accuracy: test set: 1.0
PS C:\Users\josia\OneDrive\Desktop\Documents\FileCabinet\College\23-24\IntroToAi\hw4_stuff\HW_4_Programming 4> |
```

2. python Linear_Classifiers.py --data starplus --algorithm logistic

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PS C:\Users\josia\OneDrive\Desktop\Documents\FileCabinet\College\23-24\IntroToAi\hw4_stuff\HW_4_Programming 4> python Linear_Classifiers.py --data starplus --algorithm logistic
number of training data instances: (258391, 40)
number of test data instances: (258391, 14)
number of training data labels: (40, 1)
number of test data labels: (14, 1)
40
C:\Users\josia\OneDrive\Desktop\Documents\FileCabinet\College\23-24\IntroToAi\hw4_stuff\HW_4_Programming 4\Linear_Classifiers.py:158: DeprecationWarning: Conversion of an array with ndim > 0 to a scalar is deprecated, and will error in future. Ensure you extract a single element from your array before performing this operation. (Deprecated NumPy 1.25.)
    return float(sum(correct)) / len(correct)
Accuracy: training set: 1.0
Accuracy: test set: 0.7142857142857143
PS C:\Users\josia\OneDrive\Desktop\Documents\FileCabinet\College\23-24\IntroToAi\hw4_stuff\HW_4_Programming 4> |
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3. python Linear_Classifiers.py --data simple --algorithm perceptron

```
PS C:\Users\josia\OneDrive\Desktop\Documents\FileCabinet\College\23-24\IntroToAi\hw4_stuff\HW_4_Programming 4> python Linear_Classifiers.py --data simple --algorithm perceptron
number of training data instances: (3, 8)
number of test data instances: (3, 2)
number of training data labels: (8, 1)
number of test data labels: (2, 1)
C:\Users\josia\OneDrive\Desktop\Documents\FileCabinet\College\23-24\IntroToAi\hw4_stuff\HW_4_Programming 4\Linear_Classifiers.py:158: DeprecationWarning: Conversion of an array with ndim > 0 to a scalar is deprecated, and will error in future. Ensure you extract a single element from your array before performing this operation. (Deprecated NumPy 1.25.)
    return float(sum(correct)) / len(correct)
Accuracy: training set: 1.0
Accuracy: test set: 1.0
PS C:\Users\josia\OneDrive\Desktop\Documents\FileCabinet\College\23-24\IntroToAi\hw4_stuff\HW_4_Programming 4> |
```

4. python Linear_Classifiers.py --data starplus --algorithm perceptron

```
PS C:\Users\josia\OneDrive\Desktop\Documents\FileCabinet\College\23-24\IntroToAi\hw4_stuff\HW_4_Programming 4> python Linear_Classifiers.py --data starplus --algorithm perceptron
number of training data instances: (258391, 40)
number of test data instances: (258391, 14)
number of training data labels: (40, 1)
number of test data labels: (14, 1)
C:\Users\josia\OneDrive\Desktop\Documents\FileCabinet\College\23-24\IntroToAi\hw4_stuff\HW_4_Programming 4\Linear_Classifiers.py:158: DeprecationWarning: Conversion of an array with ndim > 0 to a scalar is deprecated, and will error in future. Ensure you extract a single element from your array before performing this operation. (Deprecated NumPy 1.25.)
    return float(sum(correct)) / len(correct)
Accuracy: training set: 1.0
Accuracy: test set: 0.7857142857142857
PS C:\Users\josia\OneDrive\Desktop\Documents\FileCabinet\College\23-24\IntroToAi\hw4_stuff\HW_4_Programming 4> |
```