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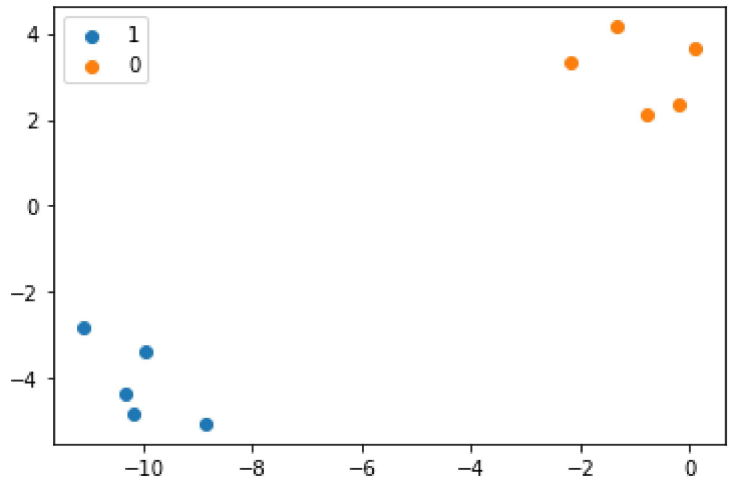
#example of binary classification task
from numpy import where
from collections import Counter
from sklearn.datasets import make_blobs
from matplotlib import pyplot
#define dataset
X, y= make_blobs(n_samples=10, centers=2, random_state=1)
#summarize dataset shape
print(X.shape, y.shape)
#summarize observations by class label
counter = Counter(y)
print(counter)
#summarize first few examples
for i in range(5):
  print(X[i], y[i])
  #plot the dataset and color them by class label
for label, _ in counter.items():
  row_ix = where(y == label)[0]
  pyplot.scatter(X[row_ix, 0],X[row_ix, 1], label=str(label))
pyplot.legend()
pyplot.show()
```

```
(10, 2) (10,)
Counter({1: 5, 0: 5})
[-10.17014071  -4.83120697] 1
[-11.09833168  -2.80862484] 1
[-9.95549876 -3.37053333] 1
[-8.86394306 -5.05323981] 1
[0.08525186 3.64528297] 0
```



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