3_roc_curve

May 27, 2019

In [ ]:
```
import numpy as np
from sklearn import metrics
import matplotlib.pyplot as plt
```

In [ ]:
```
y = np.array([1, 1, 2, 2])
scores = np.array([0.1, 0.4, 0.35, 0.8])
fpr, tpr, thresholds = metrics.roc_curve(y, scores, pos_label=2)
```

In [ ]:
```
fpr
```

In [ ]:
```
tpr
```

In [ ]:
```
thresholds
```

In [ ]:
```
y = np.array([1, 1, 2, 2])
pred = np.array([0.1, 0.4, 0.35, 0.8])
fpr, tpr, thresholds = metrics.roc_curve(y, pred, pos_label=2)
roc_auc = metrics.auc(fpr, tpr)
```

In [ ]:
```
plt.figure()
lw = 2
plt.plot(fpr, tpr,
         lw=lw, label='ROC curve (area = %0.2f)' % roc_auc)
plt.plot([0, 1], [0, 1], color='navy', lw=lw, linestyle='--')
plt.xlim([0.0, 1.0])
plt.ylim([0.0, 1.05])
plt.xlabel('False Positive Rate')
plt.ylabel('True Positive Rate')
plt.title('Receiver operating characteristic example')
plt.legend(loc="lower right")
plt.show()
```

In [ ]: