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Perceptron

```
import numpy as np
import pandas as pd
import seaborn as sns
import matplotlib.pyplot as plt
```

```
df = pd.read_csv('placement.csv')
```

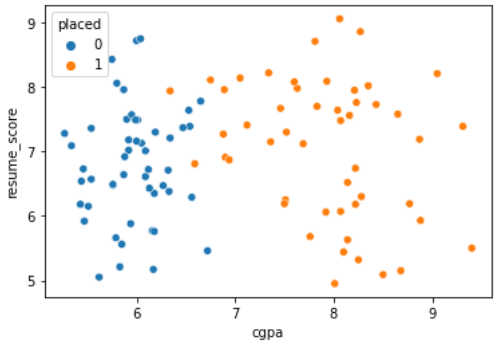
```
print(df.shape)
df.head()
```

(100, 3)

	cgpa	resume_score	placed
0	8.14	6.52	1
1	6.17	5.17	0
2	8.27	8.86	1
3	6.88	7.27	1
4	7.52	7.30	1

```
sns.scatterplot(df['cgpa'],df['resume_score'],hue=df['placed'])
```

```
C:\Users\acer\anaconda3\lib\site-packages\seaborn\_decorators.py:36: FutureWarning: Pass the following variables as keyword args: x,
  warnings.warn(
<AxesSubplot:xlabel='cgpa', ylabel='resume_score'>
```




```
x = df.iloc[:,0:2]
y = df.iloc[:,-1]
```

```
print (x)
```

```
     cgpa  resume_score
0    8.14          6.52
1    6.17          5.17
2    8.27          8.86
3    6.88          7.27
4    7.52          7.30
..    ...           ...
95   6.33          6.38
96   8.23          7.76
97   6.65          7.78
98   8.14          5.63
99   6.09          6.61

[100 rows x 2 columns]
```

```
print(y)
```

```
0     1
1     0
2     1
3     1
```

```
4     1
      ..
95    0
96    1
97    0
98    1
99    0
Name: placed, Length: 100, dtype: int64
```

```
from sklearn.linear_model import Perceptron
p = Perceptron()
```

```
p.fit(X,y)
```

```
▾ Perceptron
Perceptron()
```

```
p.coef_
```

```
array([[ 40.26, -36.  ]])
```

```
p.intercept_
```

```
array([-25.])
```

```
from mlxtend.plotting import plot_decision_regions
```

```
plot_decision_regions(X.values, y.values, clf=p, legend=2)
```

```
C:\Users\acer\anaconda3\lib\site-packages\sklearn\base.py:465: UserWarning: X does not have valid feature names, but Perceptron was
  warnings.warn(
<AxesSubplot:>
```