

ai module prac

NeoDoggy 21.0617

```
1  from numpy import genfromtxt
2  from keras.utils import np_utils
3  from keras.models import Sequential
4  from keras.layers import Dense
5  import matplotlib.pyplot as plt
6  import pandas as pd
7  import seaborn as sns
8  import numpy as np
9  import pydot
10 data = genfromtxt('qq.csv', delimiter=',')
11 x=data[:, :-1]
12 y=data[:, -1]
13 xtr=x[:-200]
14 ytr=y[:-200]
15 xts=x[-200:]
16 yts=y[-200:]
17 ytr=np_utils.to_categorical(ytr,10)
18 yts=np_utils.to_categorical(yts,10)
19 model=Sequential()
20 model.add(Dense(input_dim=8,units=128,activation='relu'))
21 model.add(Dense(units=64,activation='relu'))
22 model.add(Dense(units=10,activation='softmax'))
23 model.compile(loss='categorical_crossentropy',optimizer='adam',metrics=['accuracy'])
24 train_history=model.fit(x=xtr,
25                         y=ytr,
26                         validation_split=0.2,
27                         epochs=1000,
28                         batch_size=600,
29                         verbose=2)
30 #plt.plot(train_history.history['loss'])
31 plt.plot(train_history.history['accuracy'])
32 plt.show()
33 model.evaluate(xts,yts,batch_size=1000)
34 prediction=model.predict_classes(xts)
35 print(prediction[:10])
```

```
1/1 [=====] - ETA: 0s - loss: 0.7254 - accuracy: 0.7150
1/1 [=====] - 0s 16ms/step - loss: 0.7254 - accuracy: 0.7150
[0 0 0 0 0 0 1 0 0 0]
```

output:https://raw.githubusercontent.com/NeoDoggy/ai_module_prac/master/output
(https://raw.githubusercontent.com/NeoDoggy/ai_module_prac/master/output)

accuracy:

