数据集划分：取三类动作的第一阶段的trigger（11,21,31）作为start\_index，向后取长度为4000（4s）的窗口

def prepare\_dataset(filepaths):  
 all\_segments = []  
 all\_labels = []  
 triggers\_list = [11, 21, 31]  
 labels = [0, 1, 2]  
  
 for filepath in filepaths:  
 data = load\_data(filepath)  
 eeg\_data = data['data'][:-1, :]  
 trigger\_signals = data['data'][-1, :]  
 for triggers, label in zip(triggers\_list, labels):  
 segments = extract\_specific\_segments(eeg\_data, trigger\_signals, triggers)  
 all\_segments.append(segments)  
 all\_labels.append(np.full(segments.shape[0], label))  
  
 return np.concatenate(all\_segments), np.concatenate(all\_labels)

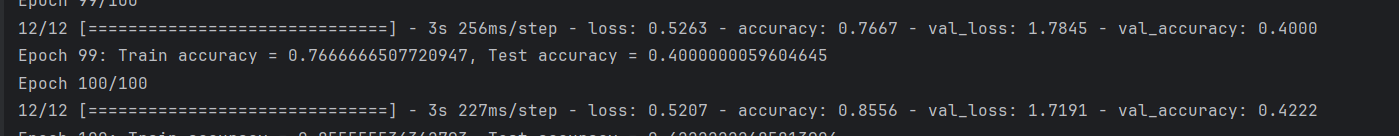
def extract\_specific\_segments(eeg\_data, trigger\_signals, trigger):  
 segments = []  
 i = 0  
 while i < len(trigger\_signals):  
 if trigger\_signals[i] == trigger:  
 start\_index = i  
 end\_index = start\_index + 4000  
 if end\_index <= eeg\_data.shape[1]: # 确保段落不会超出数据范围  
 segment = eeg\_data[:, start\_index:end\_index]  
 segments.append(segment)  
 i += 1  
 return np.array(segments)

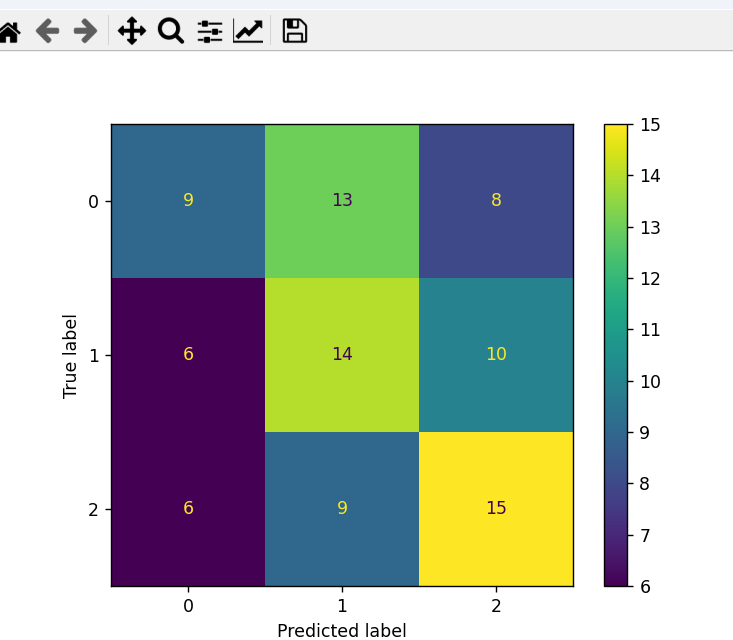
训练条件：官网下载训练和测试数据集，作上述处理后得到两个90\*64\*4000的数组

模型：DBNet，lr=0.0005（early\_stop\_lr=0.00001）epoch=100-300 batch\_size=8

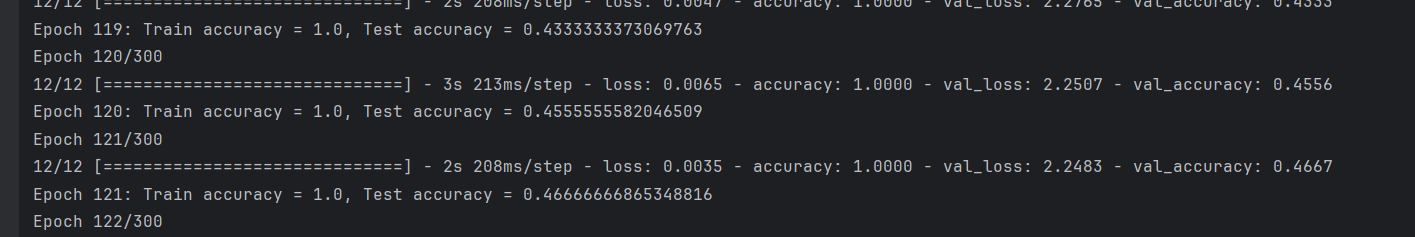
受试者：s2

实验结果：





加上滤波：  
fs = 1000 / 2  
FLTNUM = scipysignal.firwin(1000 \* 2 + 1, np.array([8, 30]) / fs, pass\_zero='bandpass')



EEGNet：其他条件同上

model = EEGNet(nb\_classes = 3, Chans = 64, Samples = 4000,  
 dropoutRate = 0.5, kernLength = 32, F1 = 8, D = 2, F2 = 16,  
 dropoutType = 'Dropout')

准确率最高52，平均45