part1_eval

December 5, 2022

[ ]:
```
from sklearn.model_selection import train_test_split
import numpy as np

import os
os.environ['TF_CPP_MIN_LOG_LEVEL'] = '3'

from tensorflow import keras
```

[ ]:
```
# get data
X = np.load('X.npy')
y = np.load('y.npy')
```

[ ]:
```
X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.2,␣
↪stratify=y, random_state=42)
```

[ ]:
```
X_test_np = np.array(X_test)
X_test_np = X_test_np.reshape(X_test_np.shape[0], X_test_np.shape[1], X_test_np.
↪shape[2], 1)

y_test_np = np.array(y_test)
```

[ ]:
```
del X_train
del X_test
del y_train
del y_test
```

[ ]:
```
cwd = os.getcwd()
cwd += '/models'

for folder in os.listdir(cwd):
    model = keras.models.load_model(cwd + '/' + folder)
    score, acc = model.evaluate(X_test_np, y_test_np)
    print(f'Accuracy of model {folder}: {round(acc, 4)}')

    # for i, filters in enumerate(num_filters):
    # for j, kernels in enumerate(kernel_sizes):
    #     for k, opt in enumerate(optimizers):
```

```
50/50 [==============================] - 12s 27ms/step - loss: 0.1540 -
accuracy: 0.9538
Accuracy of model model_1_0_0: 0.9538
50/50 [==============================] - 2s 19ms/step - loss: 0.1426 - accuracy:
0.9600
Accuracy of model model_0_0_2: 0.96
50/50 [==============================] - 1s 17ms/step - loss: 0.1380 - accuracy:
0.9644
Accuracy of model model_0_1_2: 0.9644
50/50 [==============================] - 1s 23ms/step - loss: 0.1333 - accuracy:
0.9663
Accuracy of model model_0_0_1: 0.9663
50/50 [==============================] - 1s 17ms/step - loss: 0.1538 - accuracy:
0.9600
Accuracy of model model_1_1_0: 0.96
50/50 [==============================] - 5s 97ms/step - loss: 0.1382 - accuracy:
0.9700
Accuracy of model model_1_0_1: 0.97
50/50 [==============================] - 4s 67ms/step - loss: 0.1881 - accuracy:
0.9556
Accuracy of model model_1_1_1: 0.9556
50/50 [==============================] - 2s 43ms/step - loss: 0.1740 - accuracy:
0.9500
Accuracy of model model_0_0_0: 0.95
50/50 [==============================] - 4s 67ms/step - loss: 0.1662 - accuracy:
0.9619
Accuracy of model model_1_1_2: 0.9619
50/50 [==============================] - 5s 95ms/step - loss: 0.1439 - accuracy:
0.9712
Accuracy of model model_1_0_2: 0.9712
50/50 [==============================] - 2s 30ms/step - loss: 0.2126 - accuracy:
0.9281
Accuracy of model model_0_1_0: 0.9281
50/50 [==============================] - 2s 32ms/step - loss: 0.2545 - accuracy:
0.9175
Accuracy of model model_0_1_1: 0.9175
```